



# BE UNIQUE

---

## with innospec

What can you create with our ingredients today?



2026 inspirational formulation guide

# BE UNIQUE

---

## with innospec

### Return to Wonderland

Discover our 2026 formulations inspired by Alice and the Wonderland personalities. Each using our hero ingredients, capturing the latest trends and sustainability commitments.

At Innospec, we design, create and manufacture ingredients for beauty and personal care. We have the expertise, creativity and knowledge to inspire your next formulation.

Explore the full range at [innospecpersonalcare.com](https://innospecpersonalcare.com) and start creating something amazing with our ingredients today.

[innospecpersonalcare.com](https://innospecpersonalcare.com)

#### Creative new textures

Alice is a curious spirit and thrives on discovering the unknown, explore a world of intriguing textures with her.



#### For the curious

##### Introduction

AC373 Madly Sweet  
SCS 0009 Treat Me

Watermelon Sugar Scrub  
Gelato Cleanser

#### Time saving innovation

The White Rabbit is always watching the time. Don't be late, discover our clever, time saving formulations to use on the move.



#### For those on the move

##### Introduction

H0171 The Pocket Wash  
AC370 The Hurry Hair  
H0155a Never Late

Shampoo Tablet  
Conditioner Bar  
Hair and Body Wash

#### Inspiring new formats

The Mad Hatter is eccentric and extravagant. Rebel against social norms and create something extraordinary.



#### For the nonconformists

##### Introduction

OC0001 After-Tea Time  
S0304 Foam Foolery

Mouthwash Foamer  
Shower Mousse

#### Mild and gentle solutions

The Cheshire Cat helps Alice throughout her journey, empathetic and kind. Start your adventure into mild and gentle formulations.



#### For the caring

##### Introduction

H0170 The Soft Cloud  
S0302 Vanishing Cream  
H0169 Invisible Shield

Baby Shampoo  
99% Naturally Derived Shower Cream  
Protection Shampoo

#### Show your confidence

The Queen of Hearts demands results. Confidently deliver impressive and efficient formulations.



#### For the confident

##### Introduction

P0005 Majestic Mane  
S0305 Rule The Day

Pet Detangling Spray  
Under Eye Cleansing Stick

#### About Innospec



Our commitment to sustainability  
Our partnership with the International Justice Mission (IJM)

# Creative new textures

Be curious and explore a world of intriguing textures



## A note from the expert



**Choon Kang Lee**

Technical Service & Application Specialist, Asia Pacific

Choon Kang Lee explores the trend behind our formulation, Treat Me Gelato Cleanser

The dopamine beauty movement is rapidly gaining prominence in South Korea, driven by the intersection of colour, psychology, sensory stimulation, and emotional wellness. Rooted in the influence of the neurotransmitter dopamine - associated with pleasure and motivation - the trend encourages the use of vibrant colours, playful textures, and sensorial experiences to enhance both aesthetic impact and overall mood.

At the heart of this trend is Dopamine Cleansing, transforming your daily cleanse into a joyful ritual. Consumers increasingly value effective products that are crafted to transform routine cleansing into a moment of joy, delighting senses with textures, scent, visuals and feel-good moments in every wash.

This indulgent gelato crème formula exemplifies dopamine cleansing through sensorial design: melts effortlessly in your palms, then activated with water—blooms into a rich, cloud-like foam powered by Innospec sulfate-free surfactants. It purifies gently while nourishing deeply — leaving your skin soft, supple, and refreshed. One cleanse, and your skin (and mood!) feel instantly uplifted.

## Hero ingredients

### EMPIGEN® BSP

(Cocamidopropyl Betaine)

### NANSA® LSS 495/H

(Sodium C14-16 Olefin Sulfonate)

### Pureact I-78P

(Sodium Cocoyl Isethionate)

### Pureact I-85EC

(Sodium Cocoyl Isethionate)

### Pureact WS Conc

(Sodium Methyl Cocoyl Taurate)

## Explore with Alice

Alice is a curious spirit and thrives on discovering the unknown, explore a world of intriguing textures with her.

Alice doesn't wait for change - she seeks it boldly. She steps into the unknown with a fearless sense of wonder, ready to challenge norms and rewrite her own narrative. Every formulation becomes a doorway to possibility: a gentle push toward reinvention, a journey where beauty evolves with imagination.

For those who believe transformation begins with curiosity, discover the magic of products designed to reveal unexpected texture, luminous potential. We craft experiences that elevate, enchant, and inspire — beauty that feels like stepping into a world where anything is possible. Minimal rules, maximum discovery.



## Motivation for the formulation

This formulation is a fragrant, exfoliating body treatment designed to remove dead skin cells while leaving the skin feeling fresh and rejuvenated.

2026 is the Year of the Watermelon. The fruit is dominating both food and beauty, following the ‘fruity body scrubs’ trend: a “spa-at-home” experience to exfoliate and hydrate. The “watermelon mania” is a full-body refreshment that bridges the gap between what we eat and how we glow.

## Hero ingredients

The powdered surfactants **NANSA® LSS 495/H** (Sodium C14-16 Olefin Sulfonate) and **Pureact I-78P** (Sodium Cocoyl Isethionate) are combined to give a mild scrub cleanser with delicate foam.

Sugar crystals and kiwi seeds act as a natural, manual, physical exfoliant. Natural oils like Argan, Olive, Sunflower, Avocado, Watermelon seeds are added to moisturise and nourish the skin.

It features a sweet and juicy watermelon aroma, mixed with fruit extracts.



## Ingredients

	INCI Ingredients	Trade Name (Supplier)	% w/w
<b>A</b>	Glycerin	Glycerin 99.7% (Vantage)	q.s. to 100
	Starch Acetate/Adipate (and) Citric Acid	Carbopol® Fusion S-20 polymer (Lubrizol)	10.00
<b>B</b>	Sodium C14-16 Olefin Sulfonate	<b>NANSA® LSS 495/H (Innospec)</b>	5.00
	Sodium Cocoyl Isethionate	<b>Pureact I-78P (Innospec)</b>	3.00
<b>C</b>	Sodium Hydroxide	Sodium Hydroxide Solution (50% w/w)	1.25
<b>D</b>	Sucrose	Sugar (Earth Supplied Products)	36.90
<b>E</b>	Tocopheryl Acetate	Vitamin E Acetate (Lubrizol)	0.50
	Phenoxyethanol (and) Ethylhexylglycerin	Sharomix™ EG10 (Sharon Laboratories)	0.50
	Glycerin (and) Citrullus Lanatus (Watermelon) Fruit Extract (and) Aqua	AXI Watermelon EXT G95 (Axitech)	1.00
	Citrullus Lanatus (Watermelon) Seed Oil	Watermelon Seed Oil (LBB Specialties)	0.10
	Fragrance	Natural Watermelon Fragrance N77183 (Carrubba)	0.50
	Argania Spinosa Kernel Oil	Argan Oil	0.10
	Helianthus Annuus (Sunflower) Seed Oil	Sunflower Oil	0.10
<b>F</b>	Olea Europea (Olive) Oil	Olive Oil	0.10
	Persea Gratissima (Avocado) Oil	Avocado Oil	0.10
	Actinidia Chinensis (Kiwi) Seed	CaribX Kiwi Exf 2000 (Caribbean Natural Products)	0.60
	CI 16035	FD&C Red 40 07700-C (Sensient)	q.s.
	CI 19140	Unicert Yellow 08005-J (Sensient)	q.s.

## Preparation procedure

1. In a suitable vessel with adequate mixing capabilities, add Phase A ingredients in order. Mix until uniform.
2. Slowly add Phase B ingredients in order. Use proper ventilation. Mix until uniform.
3. Add Phase C while mixing. Note – this will thicken the product.
4. Slowly add Phase D while mixing. Note – this will thicken the product, adjust mixing speeds as needed.
5. Add Phase E ingredients in order, mixing well after each addition.
6. Use Phase F ingredients to adjust colour.

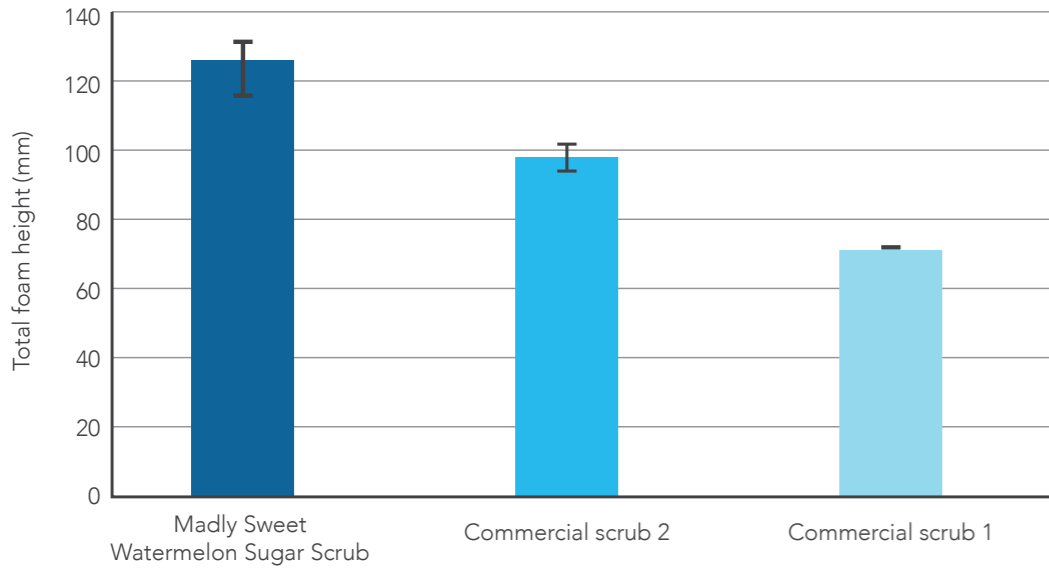
## Properties

Appearance: Red scrubbing paste with black seeds  
 pH: N/A  
 Viscosity: Viscous paste  
 Stability: 12 weeks at 45°C, 25°C, 5°C, and 3F/T Cycles

## Benchmarking foam height

Foam height was measured on the Kruss Dynamic Foam Analyser using a standardised protocol. The Madly Sweet formulation had the greatest amount of foam.

Maximum foam height



### Commercial scrub 1:

**INCI**

Sucrose, Glycerin, Polysorbate 20, Silica, Actinidia Chinensis (Kiwi) Seeds, Persea Gratissima (Avocado) Oil, Butyrospermum Parkii (Shea) Butter, Carthamus Tinctorius (Safflower) Seed Oil, Prunus Amygdalus Dulcis (Sweet Almond) Oil, Oenothera Biennis (Evening Primrose) Oil, Macadamia Ternifolia Seed Oil, Aloe Barbadensis Leaf Juice, Citrus Aurantium Dulcis (Orange) Oil, Citrullus Vulgaris (Watermelon) Fruit Extract, Rice Amino Acids, Hydrolyzed Soy Protein, L-Proline, Hydrolyzed Adansonia Digitata Seed Extract, Niacinamide, Aqua (Water/Eau), Ascorbic Acid, Retinyl Palmitate, Fragrance (Parfum), Phenoxyethanol, Sorbic Acid, Caprylyl Glycol, Benzyl Benzoate, Citral, Red 4 (CI 14700), Red 33 (CI 17200).

### Commercial scrub 2:

**INCI**

Caster Sugar, Sodium Laureth Sulfate, Sodium Cocoamphoacetate, Fair Trade Organic Cocoa Butter, Babassu Oil, Extra Virgin Coconut Oil, Perfume, Tonka Absolute, Vanilla Absolute, Bergamot Oil, Olibanum Resinoid, Cornstarch, Lactic Acid, Titanium Dioxide, Lauryl Betaine, Synthetic Fluorophlogopite, Tin Oxide, Silica, Alpha-Isomethyl Ionone, Coumarin, Limonene, Linalool, Colour 45410:2, Colour 77491, Colour 42090:2.



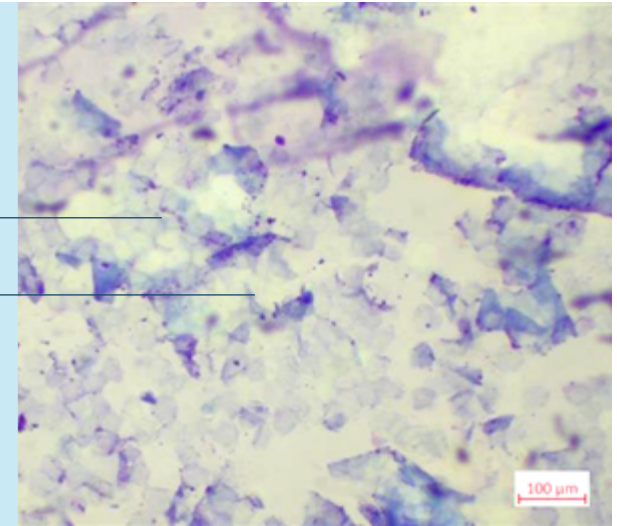
## Exfoliation shown by imaging microscopy - skin tape strip

Skin tape stripping was used to remove the outermost layer of skin after using the scrub or with no treatment. Skin cells were dyed using diff-quick solutions and imaged using bright field optical microscope, x10.

### Without Madly Sweet Watermelon Sugar Scrub

Single dead skin cells  
Nuclei visible

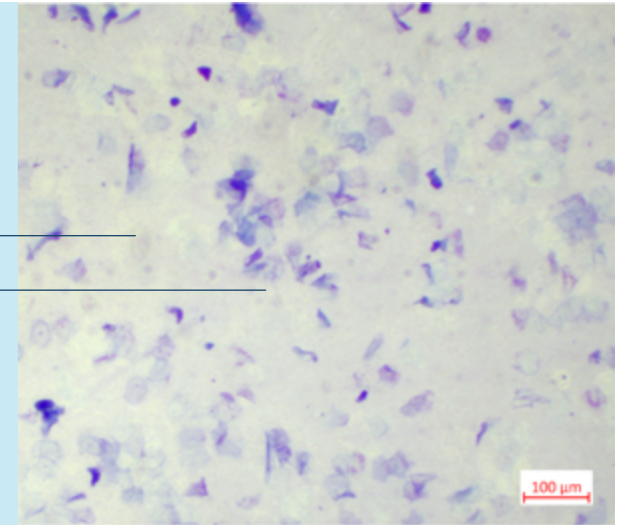
Multiple layers of skin



### With Madly Sweet Watermelon Sugar Scrub

Fewer dead skin cells

Few nuclei visible



## Motivation for the formulation

This gelato cleanser is a 2-in-1, K-beauty skincare product that functions as both a nourishing, whipped clay mask and a deep-cleansing foam, featuring a thick, whipped texture inspired by gelato. It removes impurities, makeup, and dead skin cells while providing hydration and refining pores.



## Hero ingredients

This formulation uses an optimised combination of **Pureact I-85EC** (Sodium Cocoyl Isethionate), **EMPIGEN® BSP** (Cocamidopropyl Betaine) and polyols to achieve a firm gelato texture that melts easily when it is spread on the skin.

**EMPIGEN® BSP**, our unique free-flowing powder cocamidopropyl betaine enhances foam volume, foam stability and firmness of the cleanser. **Pureact I-85EC** imparts high flash foam which is creamy and dense, while **Pureact WS Conc** (Sodium Methyl Cocoyl Taurate) imparts mildness with long-lasting foam.

The delicate balance of **Pureact I-85EC**, **Pureact WS Conc** and **EMPIGEN® BSP** transforms into a rich, voluminous creamy foam that gently purifies and nourishes your skin with enhanced mildness.

## Ingredients

	INCI Ingredients	Trade Name (Supplier)	% w/w
A	Aqua		q.s. to 100
	Glycerin	Vegetable Glycerin (NOW)	22.00
	Magnesium Aluminum Silicate	VEEGUM® Ultra (Vanderbilt Minerals)	0.50
B	Sodium Methyl Cocoyl Taurate	<b>Pureact WS Conc (Innospec)</b>	10.00
	Sodium Cocoyl Isethionate	<b>Pureact I-85EC (Innospec)</b>	18.70
	Cocamidopropyl Betaine	<b>EMPIGEN® BSP (Innospec)</b>	1.86
	Stearic Acid	Wilfarin SA 1892 (Wilmar)	0.50
C	Sodium Chloride	Sodium Chloride	0.50
	Sorbitol	Beauté by Roquette® PO 070 (Roquette)	5.00
	Helianthus Annuus (Sunflower) Seed Oil	Sunflower Seed Oil	1.00
	Tocopherol	Mixed Tocopherols 95 (DSM-Firmenich)	0.20
	Trisodium Ethylenediamine Disuccinate	<b>Natrlquest® E30 (Innospec)</b>	0.10
	D	Glycerin	Vegetable Glycerin (NOW)
Zea Mays (Corn) Starch		Maisita 9040 (AGRANA)	2.00
Caprylhydroxamic Acid (and) Hydroxyacetophenone (and) Ethylhexylglycerin		Innosei CHG (PCI Preservative)	1.00
Camellia Sinesis Leaf Extract		Actiphyte™ Green Tea GL80NP (Lubrizol)	0.10
Saccharide Isomerate		Pentavitin (DSM-Firmenich)	0.10
F	Sodium Hydroxide	Sodium Hydroxide Solution (20% w/w)	0.40
	Fragrance	Strawberry 07033 (Bell Flavors & Fragrances)	0.40
	Prunus Amygdalus Dulcis (Sweet Almond) Shell Powder	Almond Exfoliator 500 (Lessonia)	0.50

## Preparation procedure

1. Charge water into vessel and heat up to 70-75°C. Add phase A ingredients under overhead stirring for at least 10 minutes.
2. Add phase B ingredients in sequence until fully dissolved. Add in small batches to avoid clumping. Once homogeneous, turn off the heat and allow cooling under overhead stirring.
3. Add phase C ingredients when temperature is below 60°C.
4. Prepare phase D ingredients as a premix in advance. Add Premix D into the mixture with overhead stirring.
5. Add phase E ingredients when temperature reaches around 55°C.
6. Adjust pH to 6.0-6.5 and add desired fragrance. Lastly, add exfoliant.
7. Pour mixture into desired packaging at 47-50°C. Allow product to sit for 24 hours to build final structure.

## Properties

Appearance: Creamy off-white paste with exfoliating particles

pH: 6.0 - 6.5

Stability: 12 weeks, 45°C, 20°C, 5°C, and 3F/T Cycle

### Tips and tricks

It is important to heat up the water phase before the addition of Magnesium Aluminium Silicate. This will help to speed up the rate of hydration of the powder to act as suspending aid.

A softer texture is expected with the use of Pureact I-85C or Pureact I-78C.

Sorbitol added to the formulation helps to improve stability at elevated temperature and reduce the effect of sweating.

Phase C ingredients should preferably be added above 55°C so that the ingredients can dissolve better (specifically sodium chloride).

Addition of corn starch as a slurry with glycerin will help to ensure a uniform incorporation into the formula.

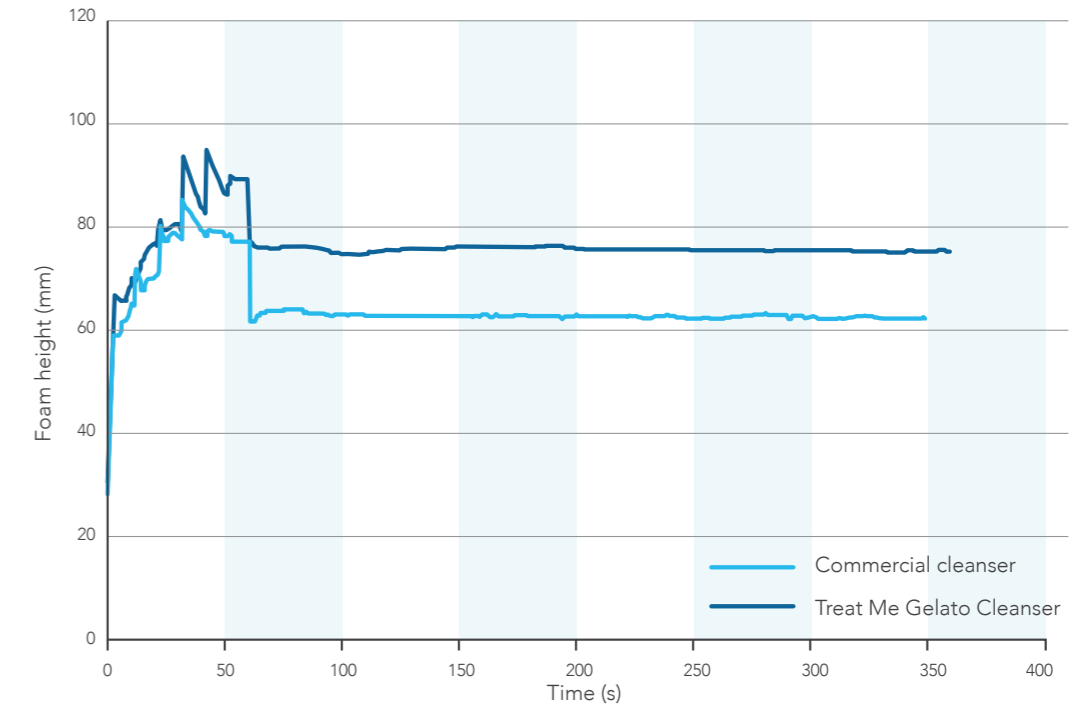
Last ingredient should be added at around 50°C to allow for uniform stirring including the exfoliants.

Setting temperature is crucial in terms of achieving a uniform paste upon cooling down. The temperature range would be around 47-50°C to pour into the mould.



### Treat Me Gelato Cleanser vs Commercial cleanser

- The dynamic foam analyser was used to measure the foam properties of the Treat Me Gelato Cleanser versus a commercial benchmark.
- The Innospec cleanser has a higher flash foam due to a blend of Sodium Methyl Cocoyl Taurate and Sodium Cocoyl Isethionate.
- The Innospec Treat Me Gelato Cleanser also has a higher foam height compared to the commercial benchmark, while both have stable foams.



### Benchmark:

#### INCI

Glycerin, Water, Sodium Cocoyl Isethionate, Illite, Decyl Glucoside, Kaolin, Butylene Glycol, Titanium Dioxide, Cetearyl Alcohol, Montmorillonite, Stearic Acid, 1,2-hexanediol, Myristic Acid, Caprylyl Glycol, Vitis Vinifera (Grape) Fruit, Extract, Centella Asiatica Leaf/Stem Powder, Fragrance, Prunus Mume Fruit Extract, Pyrus Malus (Apple) Fruit Extract, Carica Papaya (Papaya) Fruit Extract, Chromium Oxide Greens, Disodium EDTA, Oenothera Biennis (Evening Primrose) Flower Extract, Ulmus Davidiana Root Extract, Pinus Palustris Leaf Extract, Pueraria Lobata Root Extract, Curcumin, Propanediol, Sodium Hyaluronate Crosspolymer, Hydrolyzed Glycosaminoglycans, Sodium Hyaluronate, Benzyl Glycol, Madecassoside, Hydrolyzed Hyaluronic Acid, Centella Asiatica Extract, Ethylhexylglycerin, Madecassic Acid, Asiaticoside, Asiatic Acid, Hyaluronic Acid.

# Time saving innovations

Don't be late, discover our clever, time saving formulations



## A note from the expert



**Mary Perillo**  
Senior Formulation Chemist,  
Personal Care, Americas

Mary Perillo explains the thinking behind our formulation, The Hurry Hair Conditioning Bar

The Hurry Hair is a high-performance solid conditioning bar designed for luxurious hair care in a convenient, travel ready format. A synergistic blend of conditioning agents delivers shine, softness and manageability without any buildup.

Pureact SLL (Sodium Lauroyl Lactylate) enhances lubrication and wet combing, leaving hair smooth and detangled. EMPIGEN® S18 (Stearamidopropyl Dimethylamine) provides targeted conditioning by reducing static and improving softness, especially when paired with fatty alcohols. Behentrimonium Methosulfate and Behentrimonium Chloride support deep conditioning, helping to align the cuticle for improved shine and frizz control. A high level of cetearyl alcohol delivers creamy glide and bar integrity, while cocoa butter adds emollience and nourishment.

The result is a compact, waterless conditioner that leaves hair silky, polished, and ready for that person that is always on the go.

## Save time with the White Rabbit

The White Rabbit is always watching the time. Don't be late, discover our clever, time saving formulations to use on the move.

For the modern-day, life is a race against the clock where every second saved is a victory. For those constantly checking their watch and rushing to the next appointment, daily routine should be all about optimising efficiency and maintaining consistent routines, while minimising the mental load associated with a life on the move.

By picking smart, water-free products instead of bulky bottles, packing becomes easier and cuts down on the stress of travel rules.

Our clever formulations are built to keep you looking your best without ever slowing you down. Even when you are racing to make it to a very important date, these time-saving innovations make sure you show up feeling fresh and ready to shine for whatever comes next.



## Hero ingredients

**ACTIVSOFT CD**  
(Guar Hydroxypropyltrimonium Chloride)

**EMPICOL® CZ/N**  
(Sodium Coco Sulfate)

**EMPIGEN® BSP**  
(Cocamidopropyl Betaine)

**EMPIGEN® S18**  
(Stearamidopropyl Dimethylamine)

**EMPIGEN® HS/O-C**  
(Cocamidopropyl Hydroxysultaine)

**LAUREX® CS**  
(Cetearyl Alcohol)

**Luxuriact® Plus**  
(Sodium Methyl Cocoyl Taurate)

**Pureact MS-CG**  
(Sodium Methyl Oleoyl Taurate)

**Pureact Gluco L**  
(Lauryl Glucoside)

**Pureact LSR**  
(Sodium Lauroyl Sarcosinate)

**Pureact SLL**  
(Sodium Lauroyl Lactylate)

## Motivation for the formulation

This formulation concept is a small, solid, waterless and eco-friendly tablet designed as a sustainable, plastic-free alternative to bottled shampoo. It is a single-use formulation that lathers when mixed with water in the palm of the hand or on the hair for a practical travel concept for those on the move.

## Hero ingredients

The powdered surfactants **EMPICOL® CZ/N** (Sodium Coco Sulfate) and **EMPIGEN® BSP** (Cocamidopropyl Betaine) are compressed to give a mild, compatible combination with good cleansing and foam performance.

**ACTIVSOFT CD** (Guar Hydroxypropyltrimonium Chloride) is added to give light conditioning. The body of the tablet is created with a combination of cellulose, sugar-based fillers and disintegrants to enhance dissolution when combined with water.

## Ingredients

	INCI Ingredients	Trade Name (Supplier)	% w/w
A	Microcrystalline cellulose	Vivapur CS 130 FM (JRS)	48.40
	Sodium Coco Sulfate	<b>EMPICOL® CZ/N (Innospec)</b>	18.00
	D-Mannitol	D-Mannitol	15.00
	Croscarmallose	Vivastar CS40DI (JRS)	10.00
	Cocamidopropyl Betaine	<b>EMPIGEN® BSP (Innospec)</b>	3.00
	Sodium Carboxymethyl Starch	Vivastar CS Instant Powder (JRS)	3.00
	Magnesium Stearate	Magnesium Stearate	2.00
	Guar Hydroxypropyltrimonium Chloride	<b>ACTIVSOFT CD (Innospec)</b>	0.30
B	Fragrance	Hydrabella AFG32196 (The Soap Kitchen)	0.30

## Preparation procedure

1. Mix phase A together until homogeneous.
2. Coat phase A with phase B, ensuring the powder is fully coated with the liquid phase and no wet areas are present.
3. Press the powder into 2cm discs.

## Properties

Appearance: White speckled disc  
 Average weight: 2961.1 mg  
 Average thickness: 7.68 mm  
 Average hardness: 53 N





**Delivering sustainability**

When compared on a functional unit of 100 washes, our tablet format can deliver a 65% reduction in combined packaging + transport emissions (CO<sub>2</sub>e) versus a liquid product alternative. Within that total, the model shows a 65% reduction from packaging (driven by lower pack mass) and a 63% reduction from transport (driven by lower shipped mass per 100 washes). Use-phase and end-of-life are not included in these percentages.\*

**Patented technology**

**EMPIGEN® BSP**  
 INCI: Cocamidopropyl Betaine

- Unique low-dusting powder (granular)<sup>†</sup>
- Naturally derived mild amphoteric surfactant to provide gentle cleansing and foaming.
- Sulfate, preservative and 1,4-dioxane free.
- Stable over a broad pH range.
- Readily dissolves into ambient water.
- Compatible with anionic, non-ionic, cationic and amphoteric surfactants.

<sup>†</sup> Patented Technology

Characteristic	Range
Activity, %	78.0 - 82.0
Sodium Chloride, %	17 maximum
Typical usage level, %	2 -15
Formulating pH range	3 - 11
Preservative	None



**Tips and tricks**

How to use: Rub tablet onto hands or hair when showering to get the desired lather. Rinse thoroughly after use.



Our Pocket Wash Shampoo Tablet was produced on a UNICA single punch tableting machine in collaboration with IMA ACTIVE Solid Dose Solutions, Bologna, Italy.

\* Basis of claim. Results compare tablet versus SLES liquid shampoo for a functional unit of 100 washes. Savings shown are Packaging: 65.6%, Transport: 63.2%, and Overall (packaging + transport): 65.5%. Calculations use Innospec's internal model with current bill-of-materials, pack weights, and freight distances; HGV emission factors are aligned to current UK reporting practice; packaging factors reflect virgin vs. recycled mix as specified in the model. Model version: Jan-26

## Motivation for the formulation

This hair conditioning bar is a solid, concentrated, and waterless version of liquid conditioner, packaged plastic-free. These eco-friendly, long-lasting bars are designed to be rubbed onto wet hair after shampooing to nourish the hair.

## Hero ingredients

**LAUREX® CS** (Cetearyl Alcohol) and **EMPIGEN® S18** (Stearamidopropyl Dimethylamine) form the chassis of this bar with **Pureact SLL** (Sodium Lauroyl Lactylate) added to give hair conditioning. Alongside natural cocoa butter to provide nutrients for the hair, this is ideal for travel as a lightweight and spill-free option.



## Ingredients

	INCI Ingredients	Trade Name (Supplier)	% w/w
A	Cetearyl Alcohol	<b>LAUREX® CS (Innospec)</b>	52.00
	Behentrimonium Methosulfate (and) Cetearyl Alcohol	BTMS 225KC (Chemtec)	20.00
	Behentrimonium Chloride	BTAC 228KC (Chemtec)	5.00
	Stearamidopropyl Dimethylamine	<b>EMPIGEN® S18 (Innospec)</b>	5.00
B	Theobroma Cacao (Cocoa) Seed Butter	Cocoa Butter	2.00
	Sodium Lauroyl Lactylate	<b>Pureact SLL (Innospec)</b>	10.00
	Aqua		5.00
C	Fragrance	Sea Minerals Fragrance (The Soap Kitchen)	1.00

## Preparation procedure

1. Add LAUREX® CS to main vessel and begin heating to 65°C. Once melted begin moderate mixing.
2. Slowly add phase A ingredients while maintaining the temperature at 65°C.
3. Add phase B ingredients and maintain temperature.
4. Mix until homogeneous.
5. Remove from heat and add fragrance. Mix until completely homogeneous.
6. Pour into moulds and allow to cool overnight.

## Properties

Appearance: Off- white to yellow solid  
 Stability: 12 weeks, 45°C, 20°C, 5°C, and 3F/T Cycle

Hair tresses were washed by a standardised method before using the conditioning products. Images were taken after combing to show the static present in the tress. It can be seen that the Hurry Hair Conditioner Bar had the least static, even compared to a leading liquid product.

## Benchmarks

### Control

Shampoo base wash, no conditioner treatment

### Commercial liquid conditioner

Commercial liquid hair conditioner

#### INCI

Aqua, Cetearyl Alcohol, Dimethicone, Stearamidopropyl Dimethylamine, Behentrimonium Chloride, Parfum, Glycerin, Prunus Amygdalus Dulcis Oil, Cocos Nucifera Oil, Hydrolyzed SOY Protein, Sodium Gluconate, Amodimethicone, Paraffinum Liquidum, Dipropylene Glycol, Lactic Acid, Benzyl Alcohol, 1,2-Hexanediol, Citric Acid, Sodium Chloride, Disodium EDTA, Sodium Citrate, Phenoxyethanol, Cetrimonium Chloride, PEG-7 Propylheptyl Ether, Alpha-Isomethyl Ionone, Hexyl Cinnamal, Hydroxycitronellal, Linalool.

### Commercial co-wash bar

Commercial solid conditioner

#### INCI

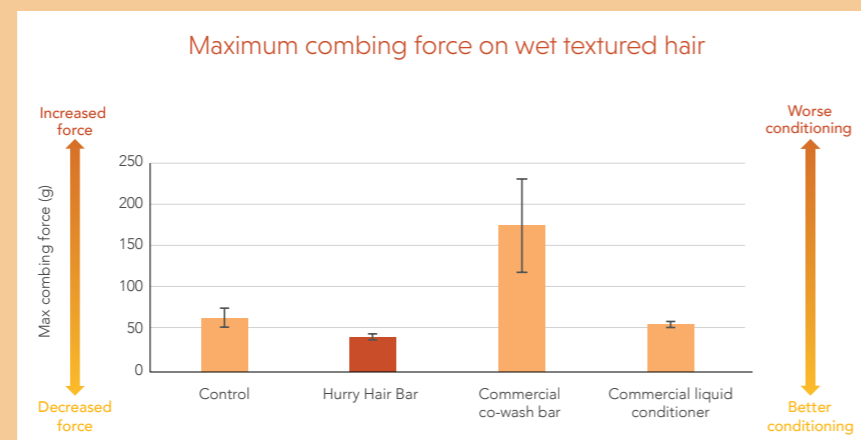
Sodium Cocoyl Isethionate, Stearic Acid, Aqua (Water), Musa Paradisiaca Fruit (Fresh Banana), Glyceryl Stearate & PEG-100 Stearate, Cocamidopropyl Betaine, Parfum, Ethyl Macadamiate, Aquafaba Powder, Behentrimonium chloride, Dipteryx Odorata Seed Extract (Tonka Seed Extract), Vanilla Planifolia Fruit Extract (Vanilla Extract), Gardenia Jasminoides Fruit Extract (Gardenia Extract), Citric Acid, Cetrimonium Chloride, Hydrolyzed Wheat Protein, Coumarin, Colour 19140.

## Results

### Conditioners on textured and dry beached hair

We can see that the Hurry Hair Conditioner Bar shows conditioning benefits, in the combing of dry bleached hair and wet textured hair. It is significantly better than the control and commercial benchmark co-wash bar similar to the commercial liquid conditioner.

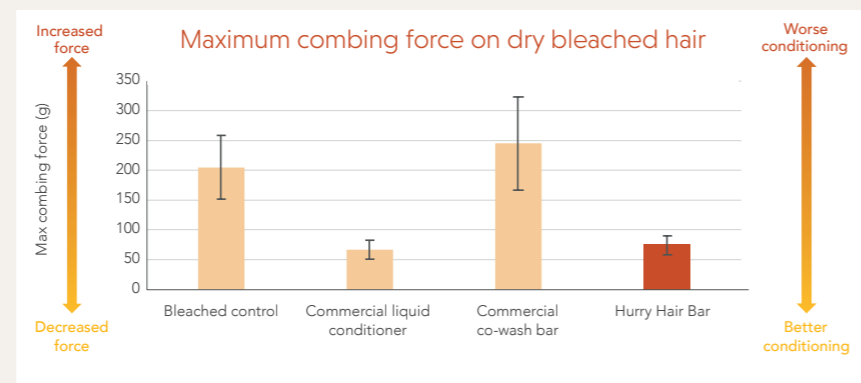
## Conditioners on textured hair



## Curl definition and fly-away benefits on wavy hair



## Conditioners on dry bleached hair



## Anti-static benefits of conditioners on bleached hair



The hair tresses were then combed on a texture analyser and the combing force measured.

## Motivation for the formulation

This carefully optimised blend of sulfate free surfactants creates a clear, stable hair and body wash formulation with good viscosity at pH 4.5.

This achievement showcases the technical expertise of Innospec.



## Hero ingredients

**Luxuriact® Plus** (Sodium Methyl Cocoyl Taurate), our pourable Taurate is the primary anionic surfactant to give good foam volume and foam quality in the presence of sebum. As SMCT needs a lot of salt to build viscosity it is paired with **Pureact MS-CG** (Sodium Methyl Oleoyl Taurate) which shifts the salt curve left to allow viscosity, build at a lower level of salt. **Pureact Gluco L** (Lauryl Glucoside) is included to also lift the viscosity as well as increasing the mildness of the formulation. **Pureact LSR** (Sodium Lauroyl Sarcosinate) gives a boost to the flash foam of the formulation and also increases the stability of the formulation. Here **EMPIGEN® HS/O-C** (Cocamidopropyl Hydroxysultaine) has been used instead of betaines to ensure that the formulation remains clear and stable. All of these surfactants have excellent hydrolytic stability and therefore there is no hydrolysis over time at this low pH.

## Ingredients

	INCI Ingredients	Trade Name (Supplier)	% w/w
A	Aqua		q.s. to 100
	Polyquaternium-10	CONDICARE PQ 10-4 (Innospec)	0.20
B	Sodium Methyl Cocoyl Taurate	Luxuriact® Plus (Innospec)	10.48
	Lauryl Glucoside	Pureact Gluco L (Innospec)	3.60
	Sodium Methyl Oleoyl Taurate	Pureact MS-CG (Innospec)	3.60
	Sodium Lauroyl Sarcosinate	Pureact LSR* (Innospec)	1.35
C	Cocamidopropyl Hydroxysultaine	EMPIGEN® HS/O-C* (Innospec)	9.40
D	Sodium Benzoate	Sodium Benzoate	0.50
E	Fragrance	Pomette (Azur Fragrances)	0.50
F	Citric Acid	Citric Acid Solution (50% w/w)	q.s. to pH 4.2-4.7
G	Sodium Chloride	Sodium Chloride	q.s. to 3,000-5,000 cP

\* = Availability in Europe subject to REACH restrictions

## Preparation procedure

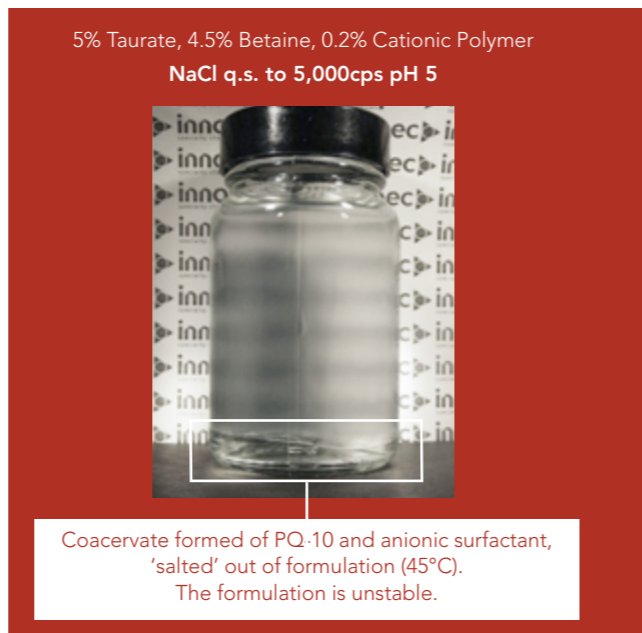
1. To a vortex of water, add CONDICARE PQ 10-4 and mix until fully dispersed and clear (A).
2. Sequentially add the ingredients in phase (B) and mix until uniform and clear.
3. Slowly add EMPIGEN® HS/O-C to main vessel and mix until uniform (C).
4. Add preservative (D) and mix until clear and uniform.
5. Add fragrance and mix until fully emulsified and clear (E).
6. Adjust pH to 4.2-4.7 with citric acid solution (50%w/w) as required (F).
7. Add small aliquots of sodium chloride (0.2%w/w) as required until viscosity of 3,000-5,000 cP.

## Properties

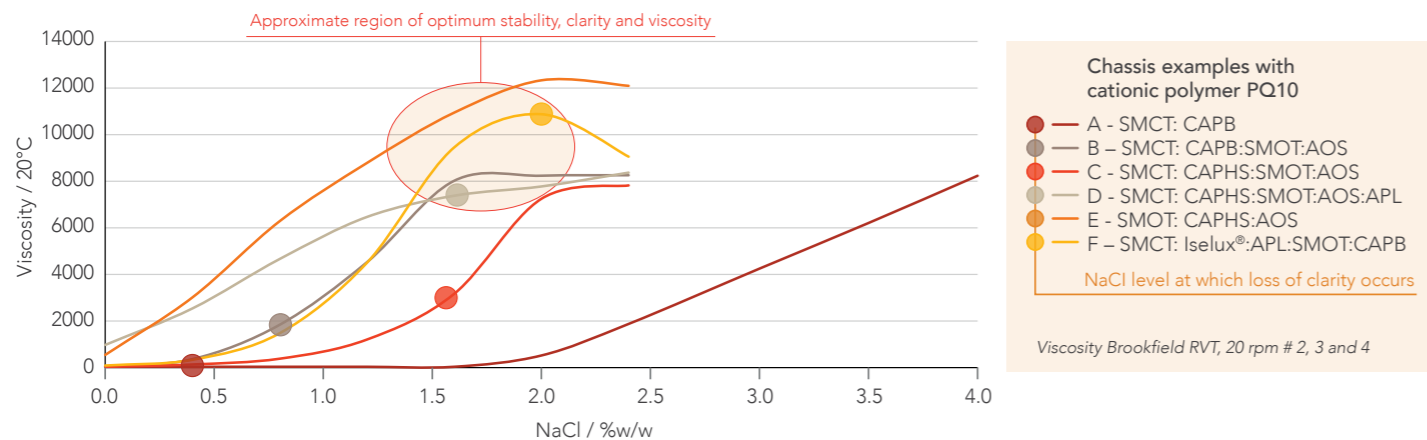
Appearance: Clear, viscous liquid  
 pH: 4.2-4.7  
 Viscosity: 3,000-5,000 cP Brookfield RV #4, 20°C, 20 rpm  
 Stability: 12 weeks, 45°C, 20°C, 5°C, and 3F/T Cycle

## Conditioning agents with taurates at low pH

- Adding high levels of salt can cause the separation of cationic polymers (complex coacervate).
- Effect increases at low pH.
- Adding co-surfactants helps – lower salt levels needed to thicken.
- Often a tertiary surfactant system is required with careful selection of co-surfactants and salt level.



## Formulations A-F Viscosity / Clarity with NaCl



Salt curves above for SMCT formulations, show the salt viscosity response for SMCT formulations containing PQ-10 (0.4%). The large circles on the graph indicates the level of salt where clarity is lost in the formulation, as larger complexes with the surfactant and polymer are formed. To obtain a clear/stable formulation the viscosity must be obtained before the level of salt in the large circle. Addition of Iselux®, AOS and CAPHS allows

greater addition of NaCl before this phenomenon occurs. SMOT gives greater viscosity build at lower NaCl levels. By optimising the ratio's of these surfactants very high viscosity, high conditioning shampoos and body washes can be formed. Hydrophilic rheology modifiers like PEG-120 Methyl Glucose Dioleate can also help stabilise cationic polymers with SMCT but reducing the level of NaCl needed to build viscosity.

## Formulating tips for low pH

- Don't panic if a low pH is needed for your choice of preservative**
- Choose sulfate-free surfactants with good hydrolytic stability**  
Luxuriact® Plus, Pureact Gluco, Pureact MS-CG, Pureact LSR
- You can thicken with salt if you choose the right type of secondary/tertiary surfactants**  
EMPIGEN® HS/O-C, Pureact MS-CG, Pureact Gluco L
- You can include cationic conditioning polymers if you choose the right tertiary surfactants**  
CONDICARE PQ10
- You can achieve a difficult brief by balancing and optimising your surfactants**

# Inspiring new formats

Be eccentric and extravagant and create something extraordinary



## Hero ingredients

EMPIGEN® TC/U  
(Cocamidopropyl Betaine)

Pureact I-85F  
(Sodium Cocoyl Isethionate)

Pureact Gluco C  
(Coco-Glucoside)

Pureact Gluco D  
(Decyl Glucoside)

Pureact CTP  
(Sodium Methyl Cocoyl Taurate)

## Be inspired with the Mad Hatter

The Mad Hatter is eccentric and extravagant. Rebel against social norms and create something extraordinary.

The Mad Hatter isn't bound by convention; he reshapes it reimagining limits until they become invitations to play. Playful formats appeal to those looking for an element of joy and escapism in their daily routines. This goes beyond just product efficacy to encompass the entire sensory and interactive experience.

Every formulation becomes a celebration of eccentric genius, and innovation. Whether it's the delight of a soft mousse or the airy innovation of our aerosol creations, every product rebels against social norms and create something extraordinary.

We craft experiences that liberate, delight, and transform, where beauty routine feels like stepping into a world where thinking differently isn't just encouraged, it's the only rule.



### Motivation for the formulation

This is a modern, alcohol-free, oral care product designed to dispense a creamy foam or mousse directly into the mouth. It acts as a "on-the-go" alternative to traditional mouthwash, intended for use after meals, snacks, or when a toothbrush is not available to quickly refresh breath, and with an aroma of cherry this is one to have fun with!



### Hero ingredients

Salt can give a poor taste and cause mouth dryness when it is present in oral care products. This formulation utilises surfactants with low salt by-products to avoid this issue.

**Pureact CTP** (Sodium Methyl Cocoyl Taurate), Innospec's new powdered taurate optimised for oral care, gives the foam which is activated by the pump foamer packaging.

**EMPIGEN® TC/U** (Cocamidopropyl Betaine) is an amphoteric co-surfactant to support and stabilise the foam.

### Ingredients

	INCI Ingredients	Trade Name (Supplier)	% w/w
A	Aqua		q.s. to 100
	Sodium Benzoate	Sodium Benzoate	0.50
	Glycerin	Glycerin	12.00
B	Sodium Methyl Cocoyl Taurate	<b>Pureact CTP (Innospec)</b>	0.30
C	Sorbitol	Sorbitol	4.00
D	Cocamidopropyl Betaine	<b>EMPIGEN® TC/U (Innospec)</b>	0.80
	Glycerin	Glycerin	2.00
	Aroma	Cherry flavour (Sugar Flair Colours)	0.50
E	CI 16255 (and) CI 14720	7460 Strawberry Red (1% w/w solution) (Fast Colours)	0.20
F	Citric Acid	Citric Acid Solution (10%w/w)	0.40

### Preparation procedure

1. Add water and glycerin to main vessel followed by sodium benzoate and begin heating to 45°C (A).
2. Add Pureact CTP and mix until fully dissolved and clear (B).
3. Remove from heat and begin cooling to ambient.
4. Add sorbitol and mix until fully dissolved (C).
5. Combine ingredients in phase D and then add to main vessel. Mix until clear and uniform.
6. Add dye and mix until fully uniform (E).
7. Adjust to pH to 5.0-5.3, with 10% citric acid solution as required (F).

### Properties

Appearance: Clear water thin red liquid  
 pH: 5.0 - 5.3  
 Viscosity: <100 cP Brookfield RV, #1, 20°C, 20rpm  
 Stability: 12 weeks, 45°C, 20°C, 5°C, and 3F/T Cycles

## Benchmark

### Commercial foaming mouthwash

#### INCI

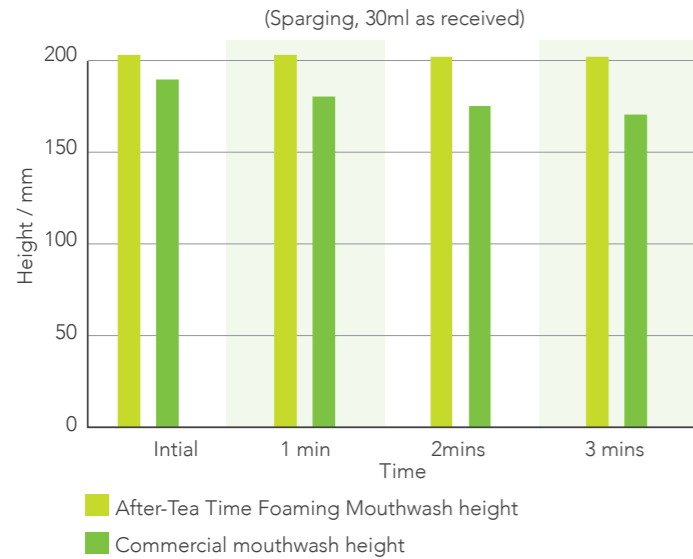
Aqua/Water, Glycerin, Xylitol, Flavour/Aroma, Poloxamer 407, 1,2-Hexanediol, Sucralose, Sodium Citrate, Caprylyl Glycol, Sodium Hyaluronate, Methyl Diisopropyl Propionamide, Sodium Gluconate, Calcium Glycerophosphate, Sodium Lauroyl Sarcosinate, Menthol.

### Results foam height / drainage

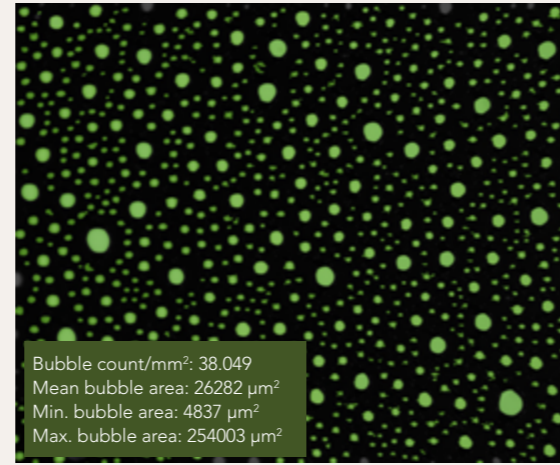
The foam height was measured using a Kruss Dynamic Foam Analyser over three minutes.

After-Tea Time Foaming Mouthwash has greater initial foam which is more stable over time compared to the commercial mouthwash.

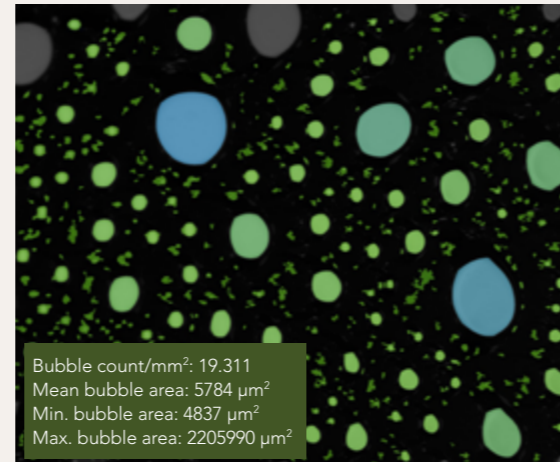
Foam volume and height / Kruss dynamic foam analyser



Bubble size distribution measured on the KRUSS Dynamic Foam Analyser



After-Tea Time Foaming MouthWash (after 1 minute)



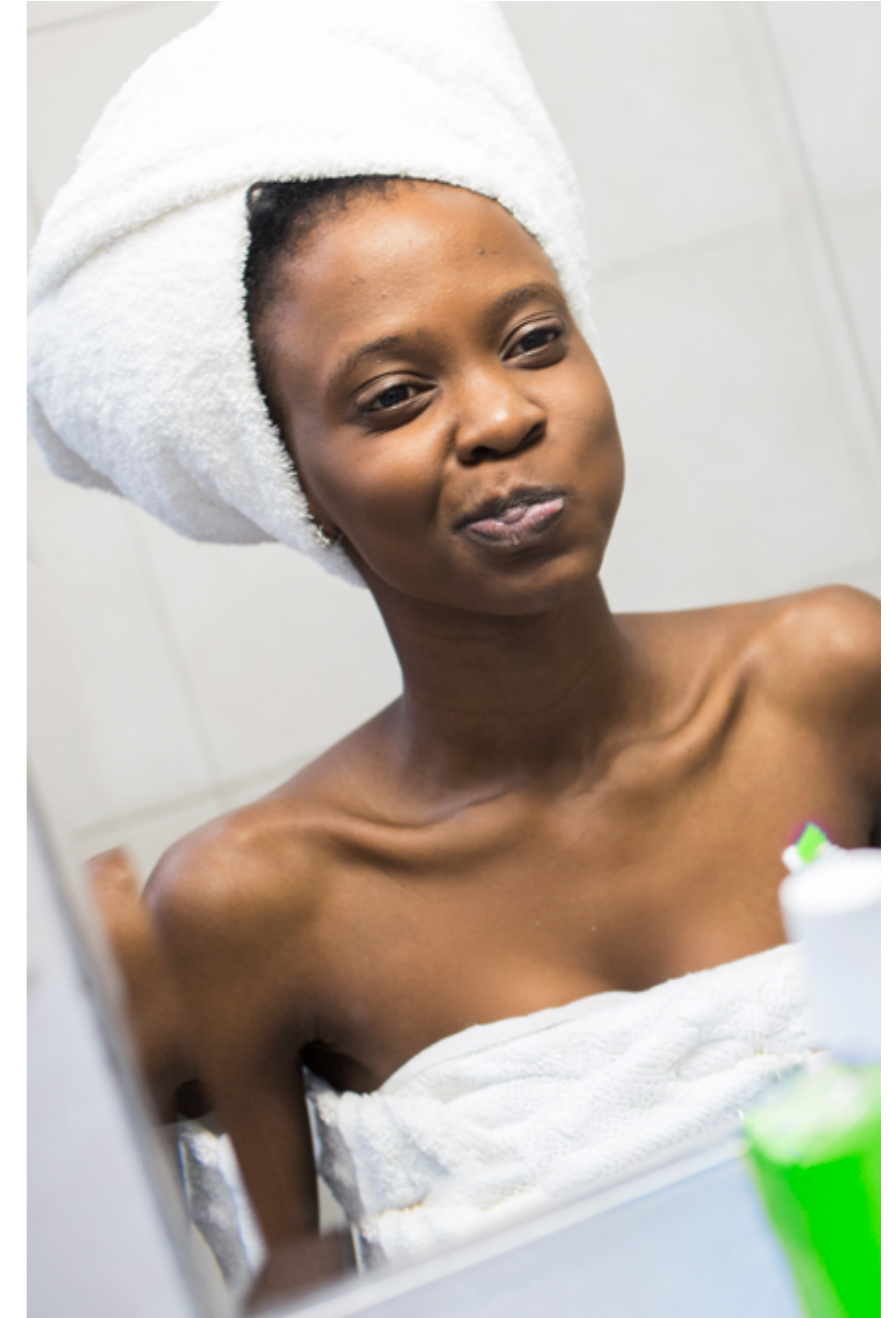
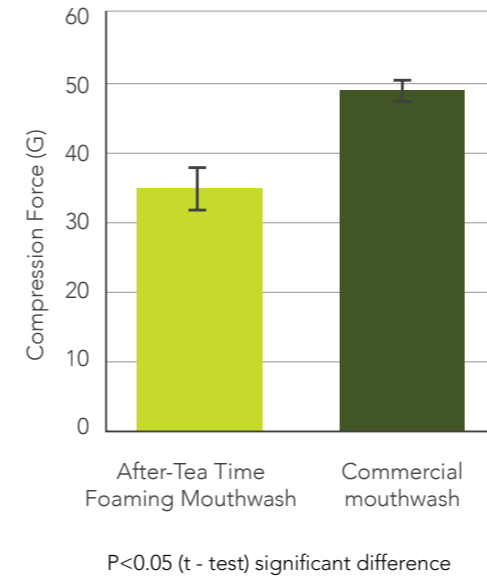
Commercial mouthwash (after 1 minute)

The Innospec formulation has a smaller, creamier bubble size

### Foam compression

The Innospec formulation has less structure compression making it easier for the mouth and to rinse and disperse.

Foam compressibility



## Motivation for the formulation

This aerosol shower mousse is a body cleansing formulation dispensed from a pressurised canister as a rich, thick, fragrant foam. It is designed to provide a luxurious, creamy lather that is instantly ready to use in the shower saving time. It has a light, airy, whipped texture that feels creamy on the skin. It also doubles as a shaving foam.



## Hero ingredients

**Pureact I-85F** (Sodium Cocoyl Isethionate) is known for its small bubble size and creamy lather which is utilised in this aerosol shower mousse to create a creamy stable foam which looks good enough to eat. **Pureact Gluco C** (Coco-Glucoside) and **Pureact Gluco D** (Decyl Glucoside) are included to add mildness to the formulation.

## Ingredients

	INCI Ingredients	Trade Name (Supplier)	% w/w
A	Aqua		q.s. to 100
	Decyl Glucoside	<b>Pureact Gluco D (Innospec)</b>	7.60
	Coco-Glucoside	<b>Pureact Gluco C (Innospec)</b>	5.70
	Glycerin	Glycerin	4.00-6.00
	Cetearyl Alcohol	Cetearyl Alcohol	3.50-4.50
	Theobroma Cacao Seed Butter	Cocoa Butter	1.50-2.50
	Sodium Cocoyl Isethionate	<b>Pureact I-85F (Innospec)</b>	1.90
	Palmitic Acid (and) Stearic Acid	Palmitic Acid and Stearic Acid	1.50-2.50
	Butyrospermum Parkii (Shea) Butter	Shea Butter	0.70-1.25
	Aqua (and) Polyquaternium-7	Polyquaternium-7	0.70-1.25
	Hydroxypropyl Guar Hydroxypropyltrimonium Chloride	Hydroxypropyl Guar Hydroxypropyltrimonium Chloride	0.05-0.15
	Preservative	Preservative	q.s.
	Fragrance	Fragrance	q.s.
	Citric Acid	Citric Acid	q.s.
B	Propane (and) Butane (and) Isobutane	LPG Blend	4.50-5.50

## Properties

Appearance: White mousse

Stability: Standard aerosol protocol, shelf life of 30 months

## Usage Tips

**Shake Well:** It is recommended to shake the can well before use.

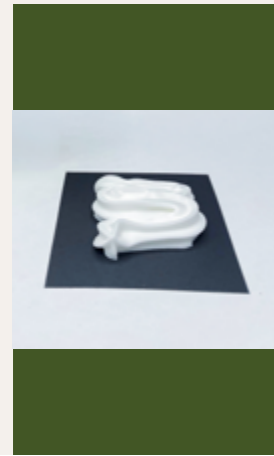
**Application:** Hold the can upright and dispense directly into your hand, then apply to wet skin.

**Safety:** These are flammable, pressurized containers that should not be exposed to temperatures exceeding 50°C.

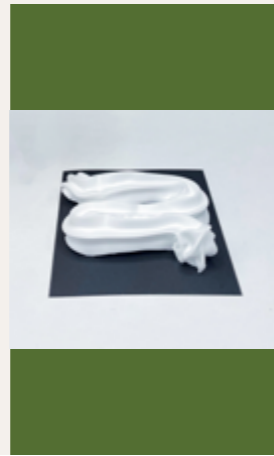
Formulated in collaboration with kdc/one [www.kdc-one.com/en](http://www.kdc-one.com/en)

## Benchmarks

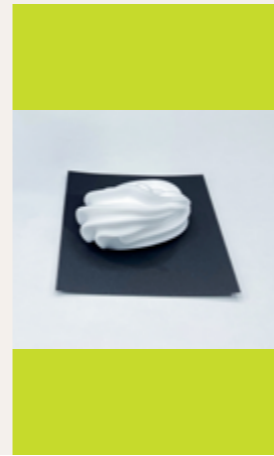
All products produced a stable creamy foam



**Commercial shower mousse 1**  
 Water, Glycerin, Butane, Sodium Cocoyl Isethionate, Decyl Glucoside, Caprylyl/ Capryl Glucoside, Stearic Acid, Propane, Fragrance, Terminalia Ferdinandiana (Kakadu Plum) Fruit Extract, Microcitrus Australasica (Finger lime) Fruit Extract, Tocopherol, Phenoxyethanol, Caprylyl Glycol, Citric Acid, Coumarin, Benzyl Salicylate, Benzyl Alcohol, Benzyl Benzoate.



**Commercial shower mousse 2**  
 Aqua, Sodium Laureth Sulfate, Oleth-20, Glycerin, Butane, Peg-40 Hydrogenated Castor Oil, Coco-Glucoside, Sorbitol, Isobutane, Propane, Coco-betaine, Propylene Glycol, Polysorbate 20, Parfum, Hydroxyethylcellulose, Phenoxyethanol, Citric Acid, Disodium Edta, Ethylhexylglycerin, Benzyl Benzoate.



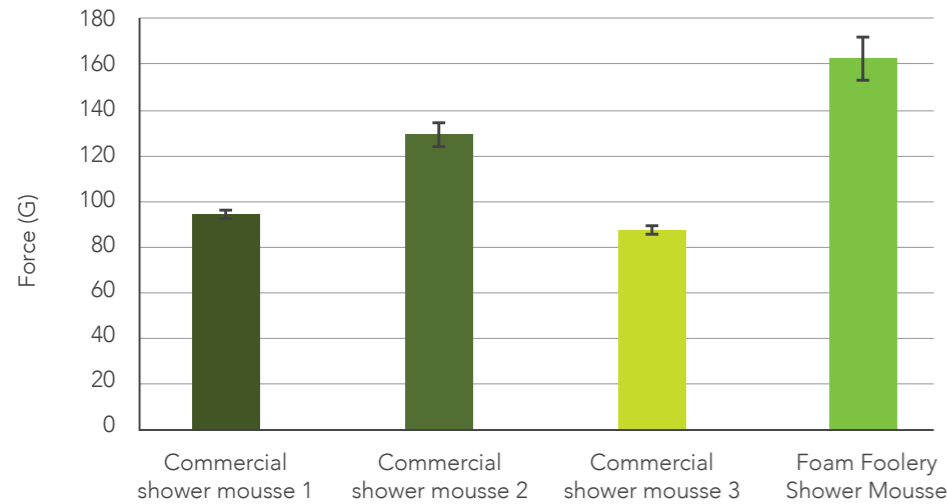
**Commercial shower mousse 3**  
 Aqua (Water), Butane, Potassium Cocoyl Glycinate, Isobutane, Glycerin, Coco-Glucoside, Propane, Cocamidopropyl Betaine, Lauryl Hydroxysultaine, Hydrogenated Starch Hydrolysate, Terminalia Ferdinandiana Fruit Extract, Potassium Chloride, Maltooligosyl Glucoside, Phenoxyethanol, Potassium Cocoate, Parfum (Fragrance), Sodium Chloride, Tea-Cocoyl Glutamate, Ppg-10 Sorbitol, Citric Acid, Ethylhexylglycerin, Sodium Lauryl Glycol Carboxylate, Bht, Hexyl Cinnamal, Linalool.



**Innospec Foam Foolery Shower Mousse**  
 (see page 33 for INCI details)

## Foam compressibility

Foam compression - shower mousse



- The texture analyser was used to measure the compressibility of each aerosol foam.
- Innospec Foam Foolery Shower Mousse has the most stable and structured foam with bounce.
- Significantly ( $p < 0.01$ ) higher compression force – stable lamellar/ plateau border.



# Mild and gentle solutions

Step into an adventure of mild and gentle formulations



## A note from the expert



**Peter Clark**  
Senior Applications Chemist,  
Personal Care, EMEA

Peter Clark explains mildness and our formulation The Soft Cloud Baby Shampoo

When choosing products for babies and infants, mildness is paramount—particularly for sensitive skin and eyes—but performance is equally important. Bath products must stay where you apply them, be easily dispensed with one hand, and produce stable, easy-to-generate foam that rinses quickly to minimise eye contact. Correct rheology is therefore vital.

Innospec's mild, sulfate-free surfactants are designed for these needs. Iselux® CBL (Sodium Cocoyl Methyl Isethionate (and) Cocamidopropyl Betaine) delivers quick flash foam with minimal agitation, rinses rapidly, and supports high viscosities at low surfactant concentrations—especially when paired with our optimised CAPB and longer-chain anionic and non-ionic surfactants.

Make bath time easier—Innospec formulations combine gentle care with reliable performance.

## Find mild and gentle solutions with the Cheshire Cat

The cat helps Alice throughout her journey, empathetic and kind. Start your adventure into mild and gentle formulations.

Amid a chaotic world, the Cheshire Cat reminds us that the most fulfilling journey is one taken with a kind heart and a gentle touch.

True care means recognising personal care choices as the foundation for caring for others and ourselves, while considering the environment.

This philosophy turns routine grooming into an intentional act of kindness and a moment of mindfulness. Choosing mild, gentle formulations that support long term hair and skin health—and minimise environmental impact—transforms daily rituals into a commitment to kinder living. Every product choice becomes a small, responsible step toward wellbeing for ourselves, those we care for, and the planet.



## Hero ingredients

**ACTIVSOFT S**  
(Cyamopsis Tetragonoloba (Guar) Gum)

**EMPIGEN® S18**  
(Stearamidopropyl Dimethylamine)

**EMPIGEN® BS/FA**  
(Cocamidopropyl Betaine)

**Iselux® CBL**  
(Sodium Cocoyl Methyl Isethionate (and) Cocamidopropyl Betaine)

**Iselux® SCMI**  
(Sodium Cocoyl Methyl Isethionate)

**Natrquest® E30**  
(Trisodium Ethylenediamine Disuccinate)

**Pureact MS-CG**  
(Sodium Methyl Oleoyl Taurate)

**Pureact Gluco C**  
(Coco-Glucoside)

**Pureact Gluco D**  
(Decyl Glucoside)

**Pureact GLT**  
(Sodium Lauroyl Glutamate)

## Motivation for the formulation

The quantities of surfactants have been carefully optimised to create a shampoo with only 8.3% active surfactant, making it mild for a baby's skin. The low levels of ingredients means less resources are consumed, without compromising on foam performance, and also results in a 96% naturally derived origin according to ISO 16128.



## Hero ingredients

**Pureact MS-CG** (Sodium Methyl Oleoyl Taurate) and **Pureact Gluco C** (Coco-Glucoside) are formulated with **Iselux® CBL** (Sodium Cocoyl Methyl Isethionate (and) Cocamidopropyl Betaine) and **EMPIGEN® BS/FA** (Cocamidopropyl Betaine) to build viscosity without additional rheology modifiers and to boost flash foam speed. Due to the ingredients chosen, no heating of the batch is required during manufacturing, also adding to the economic and sustainable credentials of this formulation. The mild surfactants chosen, along with the low activity, means this is gentle for baby's skin and eyes.

## Ingredients

	INCI Ingredients	Trade Name (Supplier)	% w/w
A	Aqua		q.s. to 100
	Guar Hydroxypropyltrimonium Chloride	AquaCat™ PF618 (Ashland)	1.00
	Citric Acid	Citric Acid Solution (50% w/w)	q.s. to pH 4.0-4.5
B	Cocamidopropyl Betaine	<b>EMPIGEN® BS/FA (Innospec)</b>	12.80
	Aqua		30.00
C	Aqua (and) Sodium Cocoyl Methyl Isethionate (and) Cocamidopropyl Betaine	<b>Iselux® CBL (Innospec)</b>	4.50
	Sodium Methyl Oleoyl Taurate	<b>Pureact MS-CG (Innospec)</b>	3.00
D	Coco-Glucoside	<b>Pureact Gluco C (Innospec)</b>	4.50
	Fragrance	Hydrabella AFG32196 (Azur)	0.30
E	Sodium Benzoate	Sodium Benzoate	0.50
	Benzyl Alcohol	Benzyl Alcohol	0.40
F	Citric Acid	Citric Acid Solution (50% w/w)	q.s. to pH 5.2-5.8

## Preparation procedure

1. Add AquaCat™ PF618 to deionized water with mixing (mix until fully dispersed).
2. Add trace amounts of citric acid solution to lower pH to 4.0-4.5 to hydrate and swell guar (A).
3. Add EMPIGEN® BS/FA and mix until uniform (B).
4. Add additional water then sequentially add ingredients in phase C mix until clear and uniform (note Pureact MS-CG and Pureact Gluco C need homogenizing by heating to 35-40°C and mixing before addition to the vessel).
5. Pre-mix phase D separately then add to the batch with stirring.
6. Add preservatives in phase (E) and mix until fully uniform and clear.
7. Adjust to pH to pH 5.2-5.8 with 50% citric acid solution as required (F).

## Properties

Appearance: Crystal clear, viscous liquid  
 pH: 5.2-5.8  
 Viscosity: 5,000 – 8,000 cP Brookfield DV-E, #4, 20°C, 20rpm  
 Stability: 12 weeks, 45°C, 20°C, 5°C, and 3F/T Cycles

**Results: No more tears testing**

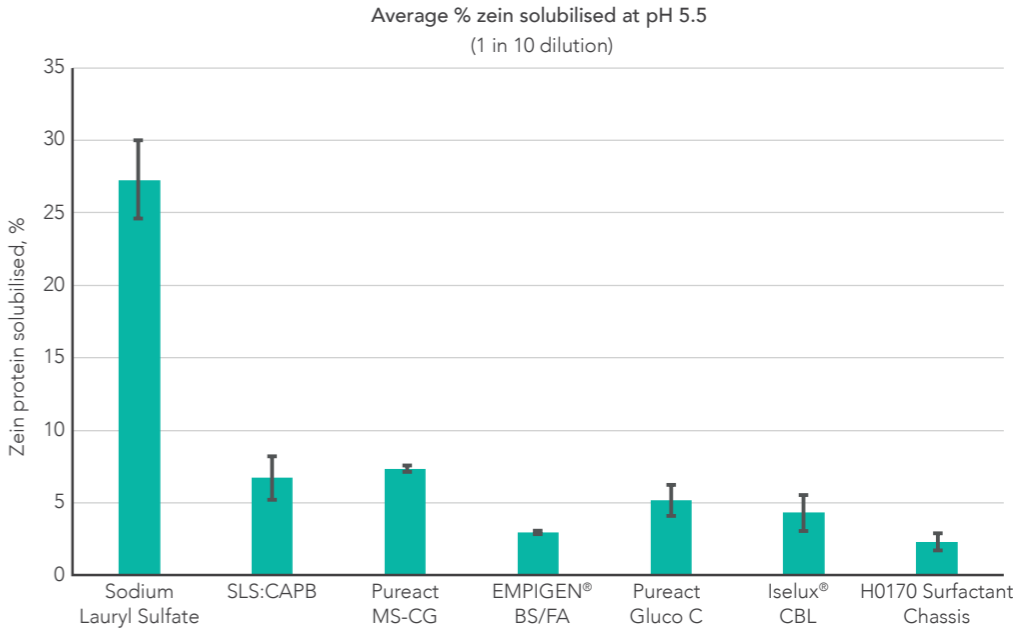
**NO TEARS FORMULA**

This combination of surfactants has been chosen in order to create a formulation that is mild and therefore ideal for baby applications. A study was carried out to test The Soft Cloud Baby Shampoo for subjective ocular irritation in healthy volunteers at 5% dilution. The 5% dilution was very well tolerated and the clinical changes, though statistically significant, were minimal. At this concentration, the claim of 'no tears' could be supported.

As this is a prototype formulation and not a final marketed product, further testing on final customer formulations will be needed.



Results – Mildness Testing



The H0170 surfactant chassis was statistically less irritant than the other test surfactants at the same activity level and on a par with EMPIGEN® BS/FA

Zein is a protein similar, but not identical, to proteins found in the skin.

It is commonly used in the Personal Care industry as an in-vitro screen to give an indication of surfactant mildness.

This experiment has been conducted using the surfactants or surfactant chassis as comparison.

It can be observed that the H0170 Soft Cloud Baby Shampoo at 8.3% surfactant activity has been designed to be extremely mild compared to 1% active surfactant products.

## Motivation for the formulation

This 99% Naturally Derived Shower Cream is a creamy, moisturising body cleanser formulated with ingredients sourced from nature that have undergone minimal, safe processing. This product aims to provide a gentle, hydrating cleanse without harsh, synthetic chemicals, making it ideal for sensitive or dry skin.



## Hero ingredients

The 100% naturally derived surfactants **Pureact Gluco C** (Coco-Glucoside), **Pureact Gluco D** (Decyl Glucoside) and **Pureact GLT** (Sodium Lauroyl Glutamate) are combined in this 99% Naturally Derived Shower Cream. A mild and gentle creamy foam is created with a soft afterfeel due to the high inclusion of sunflower oil, suspended by **ACTIVSOFT S** (Cyamopsis Tetragonoloba (Guar) Gum) and other clay based rheology modifiers.

## Ingredients

	INCI Ingredients	Trade Name (Supplier)	% w/w
A	Aqua		q.s. to 100
	Sodium Hydroxide	Sodium Hydroxide Solution (1%w/w)	q.s. to pH 7.0-8.0
B	Hectorite	Bentone Hydroclay™ 2000 (Elementis)	1.00
C	Coco-Glucoside	<b>Pureact Gluco C (Innospec)</b>	8.00
	Decyl Glucoside	<b>Pureact Gluco D (Innospec)</b>	10.00
	Sodium Lauroyl Glutamate	<b>Pureact GLT (Innospec)</b>	5.00
D	Glycerin	Vegetable Glycerin (Naissance)	8.00
	Helianthus Annuus (Sunflower) Seed Oil	Sunflower Oil (Naissance)	20.00
E	Glycerin	Vegetable Glycerin (Naissance)	4.00
	Cyamopsis Tetragonoloba (Guar) Gum	<b>ACTIVSOFT S (Innospec)</b>	0.30
	Xanthan Gum	Vanzan® NF-C (Vanderbilt Minerals)	0.60
F	Benzyl Alcohol	Microcare® BNA (Thor)	0.40
	Chlorphenesin	Microcare® CPH(P) (Thor)	0.30
	Citrus Limon (Lemon) Peel Oil	Lemon Essential Oil (Soap Kitchen)	0.75
G	Citric Acid	Citric Acid Solution (50% w/w)	q.s to pH 6.0 - 6.3

## Preparation procedure

1. Adjust pH of deionized water to pH 7.0-8.0 with 1% sodium hydroxide solution.
2. Slowly add Bentone Hydroclay™ 2000 with rapid stirring (800rpm) and mix for 30 minutes until fully hydrated.
3. Sequentially add surfactants in phase (C) and mix until uniform.
4. Slowly add Glycerin and Sunflower Oil with moderate mixing, mix until uniform.
5. In separate phase combine Guar Gum and Xanthan Gum with remaining glycerin to form slurry (E).
6. Add slurry (E) slowly to the main batch and mix for 20 minutes to fully disperse and hydrate the rheology modifiers.
7. Add the preservatives and essential oils in phase F and mix until uniform.
8. Adjust pH with Citric Acid Solution (50% w/w) to 6.0-6.3 as needed.

## Properties

Appearance: White to cream viscous lotion  
 pH: 6.0-6.3  
 Viscosity: 6,500 -7,500 cP Brookfield RV, #4, 20°C, 20rpm  
 Stability: 12 weeks, 45°C, 20°C, 5°C, and 3F/T Cycles

## Tips, tricks and more information

The combination of oil, clay and gum thickeners with an optimised combination of 100% naturally derived surfactants gives a dreamy feel on the skin.

When formulating with Bentone Hydroclay 2000, always hydrate the material in water for a minimum of 30 minutes for optimum results. To assist with handling ease, the ACTIVOSOFT S and Xanthan Gum should not be added directly to the aqueous phase but pre-mixed with glycerin to form a pourable slurry.

Pureact Gluco C and Pureact Gluco D are also available to purchase as RSPO Mass Balanced grades and as a 100% coconut sourced material.

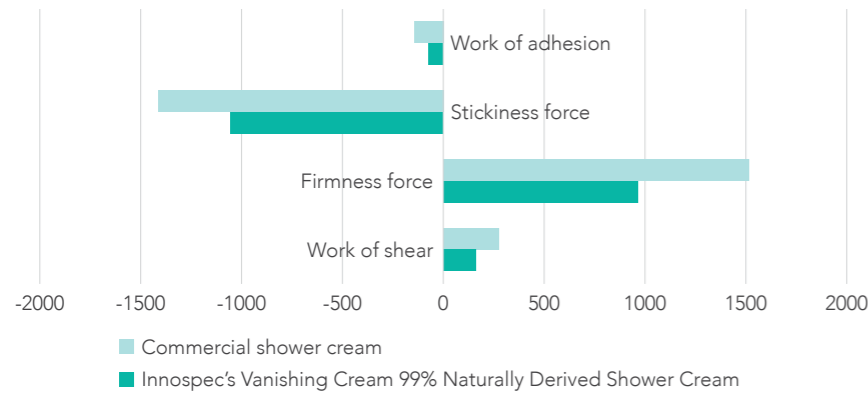


Commercial shower cream



Vanishing Cream 99% Naturally Derived Shower Cream

## Texture analysis of shower creams



We have conducted texture analysis of Innospec's Vanishing Cream 99% Naturally Derived Shower Cream against a market leading shower cream.

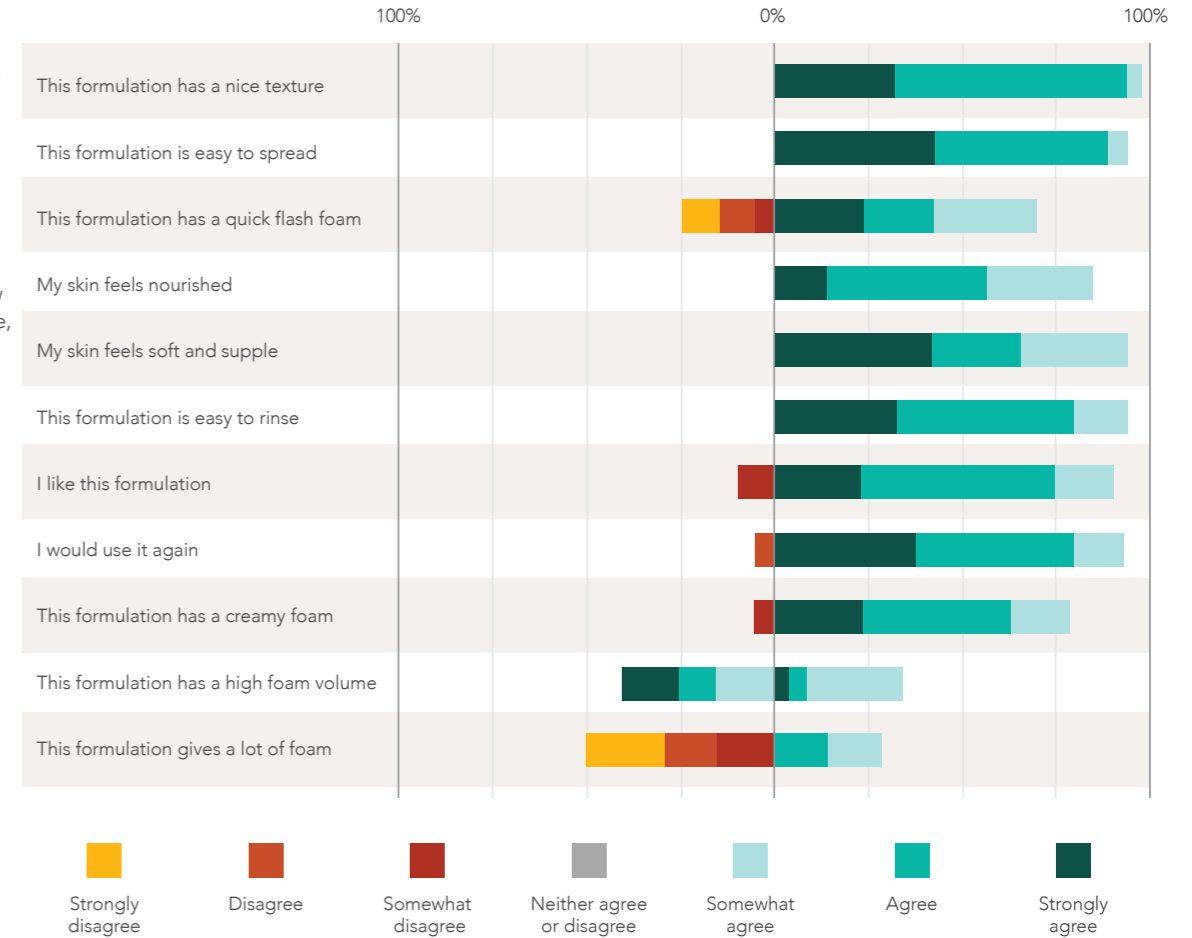
The Innospec Vanishing Cream 99% Naturally Derived Shower Cream is less adhesive, has a lower force of withdrawal indicating that it is less sticky, has less firmness providing a lighter formulation and is lower in required force to spread the formulation making it easier to spread.

## Use test results

A use test was conducted. This type of test is used by brands to confirm claims.

22 naive panelists rated sentences on a scale to create a liking scale.

It can be observed that the panellists rated the Vanishing Cream to be low foaming with a nice texture, easy to spread leaving the skin feeling supple.



## Benchmark

### INCI

Aqua, Helianthus Annuus Seed Oil, Glycerin, Decyl Glucoside, Coco-Glucoside, Alcohol, Persea Gratissima Oil, Pyrus Cydonia Seed Extract, Sodium Cocoyl Glutamate, Disodium Cocoyl Glutamate, Parfum, Limonene, Citral, Geraniol, Linalool, Citronellol, Farnesol, Xanthan Gum, Citric Acid, Hectorite.



## Motivation for the formulation

This hair protection shampoo has been designed to have a high performing chassis with luxurious foam whilst including a powerful chelant for copper reduction and UV protection. This formulation is >90% naturally derived according to ISO16128.



## Hero ingredients

This Innospec Invisible Shield Protection Shampoo has been designed with an optimum combination of surfactants to give a cost effective enhanced creamy foam combining **NANSA® LSS 38/AV** (Sodium C14-16 Olefin Sulfonate) with a small amount of **Iselux® SCMI** (Sodium Cocoyl Methyl Isethionate) for foam volume. **EMPIGEN® BS/FA** (Cocamidopropyl Betaine) and **EMPIGEN® CDR 60** (Sodium Cocoamphoacetate) have been added for viscosity, increased mildness and foam texture.

**EMPIGEN® S18** (Stearamidopropyl Dimethylamine) is added to give hair conditioning, frizz reduction and anti-static.

Active chelating and UV damage prevention agent is **Natrlquest® E30** (Trisodium Ethylenediamine Disuccinate).

## Ingredients

	INCI Ingredients	Trade Name (Supplier)	% w/w
A	Aqua		20.00
	Glycerin	Glycerin	2.00
	Guar Hydroxypropyltrimonium Chloride	ACTIVSOFT C-17 (Innospec)	0.20
	Citric Acid	Citric Acid Solution (50% w/w)	q.s.
	Cocamidopropyl Betaine	EMPIGEN® BS/FA (Innospec)	7.00
	Sodium Cocoamphoacetate	EMPIGEN® CDR 60 (Innospec)	3.00
B	Aqua		q.s. to 100%
	Sodium Cocoyl Methyl Isethionate	Iselux® SCMI (Innospec)	3.80
	Sodium C14-16 Olefin Sulfonate	NANSA® LSS 38/AV (Innospec)	15.00
	Glycol Ceterate	EMPILAN® EGMS (Innospec)	2.00
	Stearamidopropyl Dimethylamine	EMPIGEN® S18 (Innospec)	0.50
C	Trisodium Ethylenediamine Disuccinate	Natrlquest® E30 (Innospec)	1.00
	Hydrolyzed Silk Protein	Extrapone Silk GW N (Symrise)	3.00
	Fragrance	Green Tea APF107743 (Sozio Fragrances)	0.30
	Sodium Benzoate	Sodium Benzoate	0.50
	Phenoxyethanol	Phenoxyethanol	0.50
	Benzyl Alcohol	Benzyl Alcohol	0.40
D	Citric Acid	Citric Acid Solution (50% w/w)	q.s. to pH 5.5 - 6.0
	Sodium Chloride	Sodium Chloride	q.s. to 5,000-6,000cP

## Preparation procedure

1. Premix ACTIVSOFT C-17 with glycerin and add into aqua with mixing.
2. Add a small amount of citric acid to acidify the guar, the premix will clear.
3. Add the EMPIGEN® BS/FA and EMPIGEN® CDR 60 into the premix and mix until homogeneous.
4. In the main vessel add all the ingredients in phase B. Heat the main vessel to 70-75°C and mix until all the ingredients have fully dissolved.
5. Begin cooling and add phase A into phase B with stirring.
6. Add in phase C stepwise at <40°C and mix until homogeneous.
7. Adjust the pH to 5.3 - 6.0 with citric acid solution.
8. Adjust the viscosity to 5,000-6,000 cP using NaCl.

## Properties

Appearance: Pearlescent viscous liquid  
 pH: 5.3 – 6.0  
 Viscosity: 5,000 -6,000 cP Brookfield RV, #4, 20°C, 20rpm  
 Stability: 12 weeks, 45°C, 20°C, 5°C, and 3F/T Cycle

Also stable with NANSA® LSS 70, our new 70% active grade of Alpha Olefin Sulfonate.

## EDDS hair damage prevention in hair

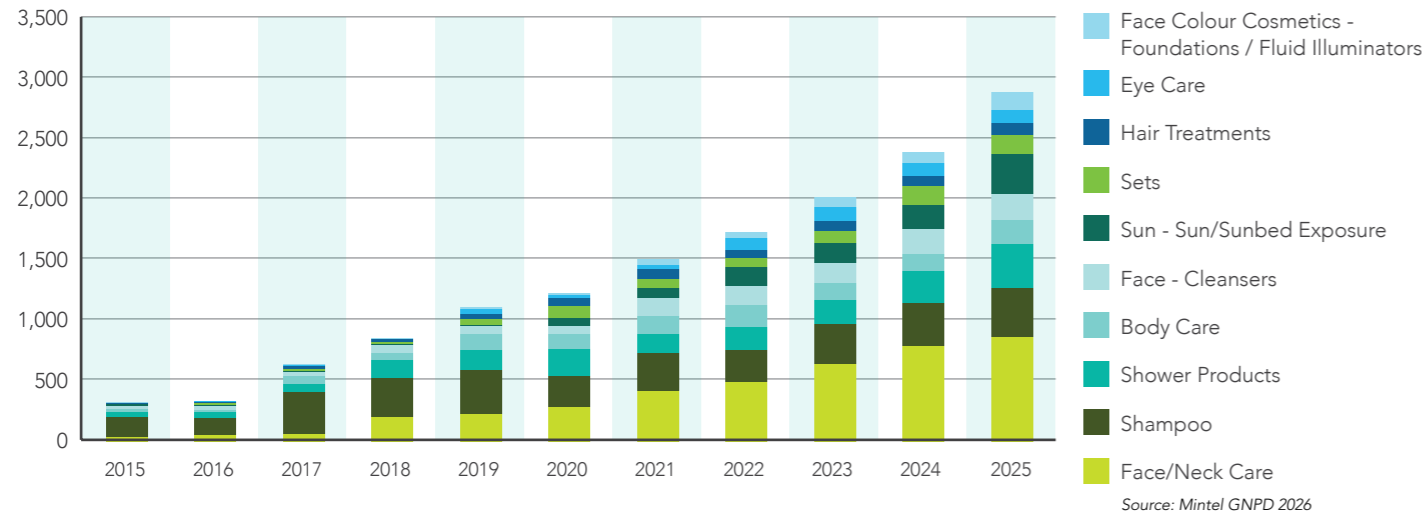
When hair is exposed to UV the oxidation of chromophores present in hair amino acids leads to hydrogen peroxide formation. This peroxide is then degraded by the presence of metal ions in hair structure into hydroxyl radicals. Hydroxyl radicals oxidise amino acids in the hair causing structural damage to the hair fibre.

EDDS is both a highly selective copper chelant and it is highly effective in blocking ·OH radical formation. Using EDDS in a hair formulation can result in less fibre damage preventing up to 95% of radical damage over 5 cycles. This makes hair resilient and leaves it with a healthy lustrous look.



## Significant growth around the world

2015 – 2025, Global launches with EDDS

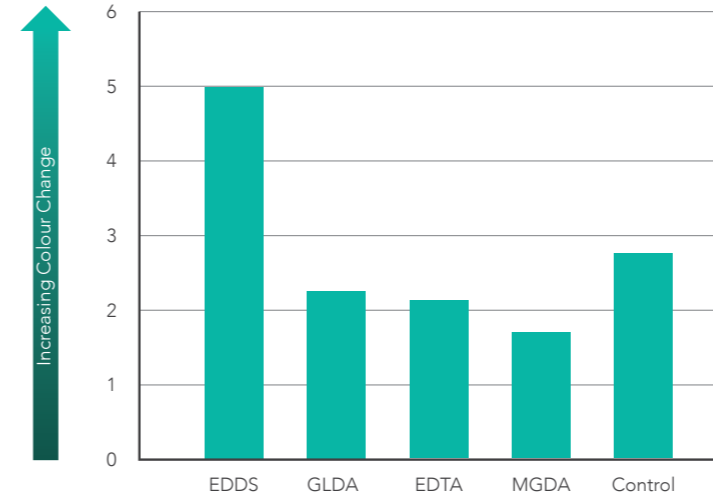


Readily biodegradable alternative to EDTA

## EDDS can remove copper from hair

Measurements comparing chelants

Colour change ( $\Delta E$ ) observed after washing hair with shampoo containing various chelants



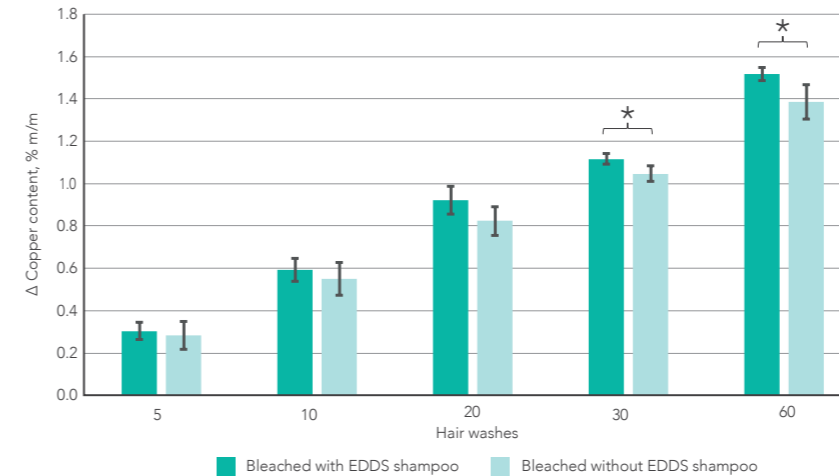
The CIE L\*a\*b\* values for the hair tress were measured with a colourimeter

Virgin hair soaked in Copper Sulfate solution and then put through wash cycles with shampoo with and without chelant followed by colour measurement.

After 60 washes, EDDS gave the largest colour change from the unwashed copper sulfate treated hair, showing that more copper sulfate was removed.

Atomic absorption measurements bleached hair

Reduction of copper content by AA in bleached hair over 60 washes

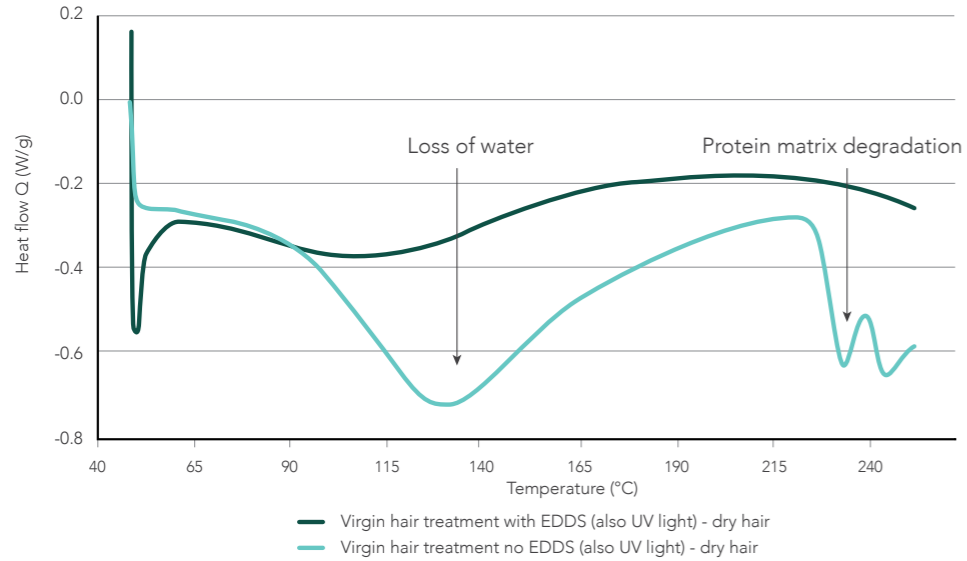


Bleached hair was soaked in Copper Sulfate solution and then put through wash cycles with shampoo with and without EDDS followed by AA analysis for copper.

The shampoo with EDDS removed more copper from the hair compared to the control without EDDS after 30 and 60 washes ( $p < 0.05$ ).

EDDS can prevent UV damage of hair

Differential scanning calorimetry measurements



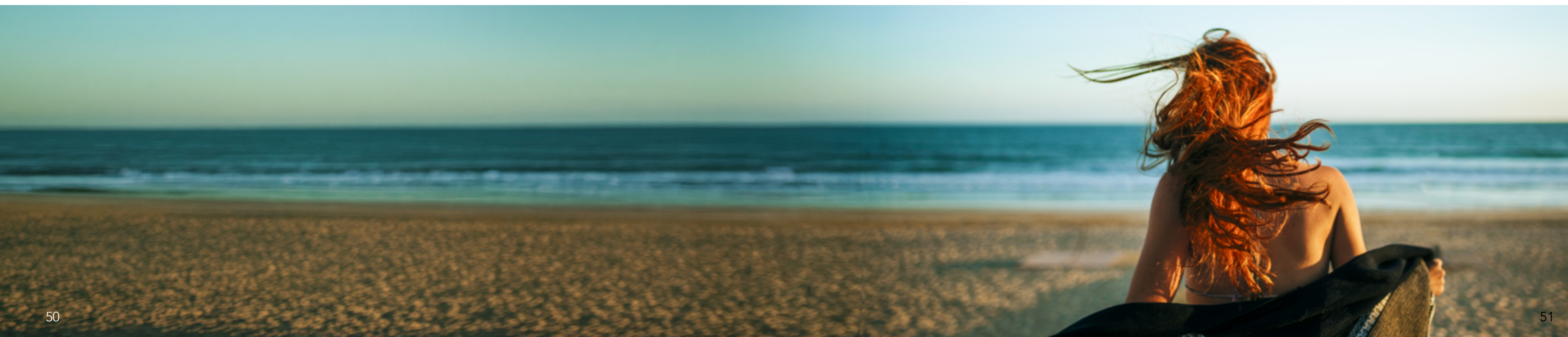
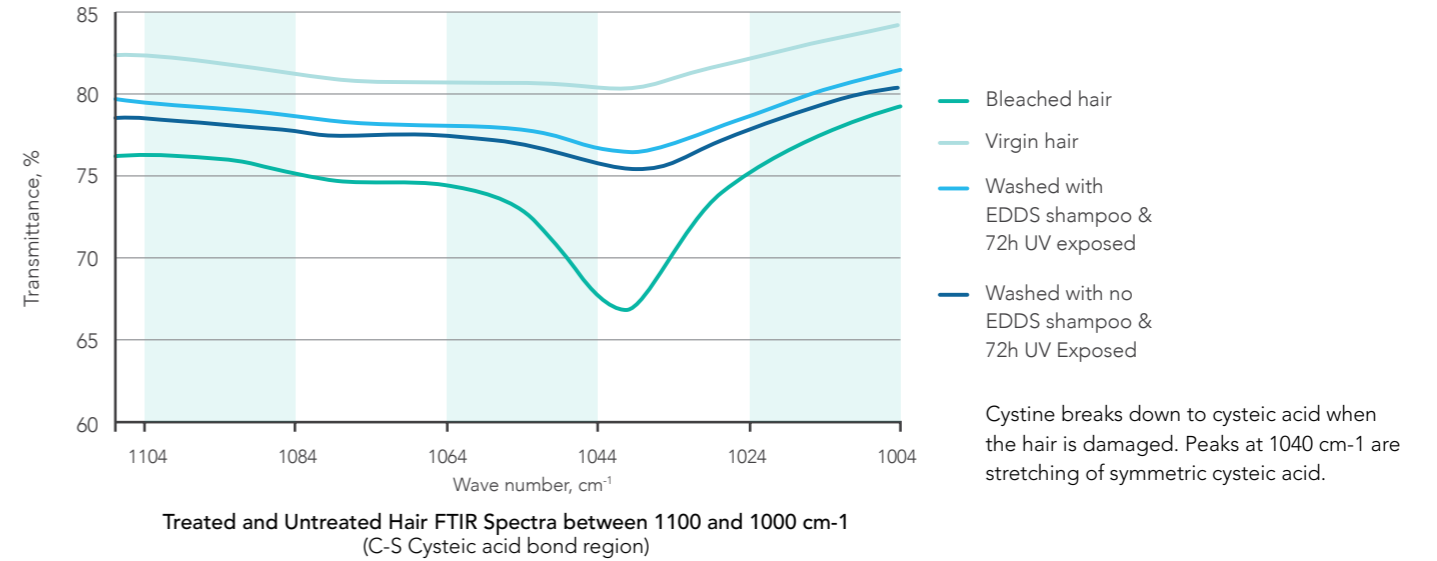
Average protein matrix degradation peak temperature: 223.55°C ± 13.49°C.

A lower temperature required to degrade the protein matrix shows a higher amount of protein damage in the hair when EDDS was not included.

Average protein matrix degradation peak temperature: >250°C.

Protein matrix degradation peak not seen on the EDDS treated hair.

Fourier transform InfraRed measurements



# Show your confidence

Deliver swift and efficient formulations to suit the most demanding people (and pets)



## Hero ingredients

Pureact I-78P  
(Sodium Cocoyl Isethionate)

Pureact GLT  
(Sodium Lauroyl Glutamate)

InnoSil 905  
(Dimethicone)

Specsil K-57  
(Phenyl Trimethicone)

FINSOLV® TN  
(C12-15 Alkyl Benzoate)

## Be confident with the Queen of Hearts

The Queen of Hearts demands results. Confidently deliver impressive and efficient formulations.

**The Queen of Hearts demands results, not promises.**

She knows that time is the one thing she cannot rule, so she refuses to waste it. Every formulation is an investment in immediate self-enhancement, a tangible shift toward perfection.

For those seeking solutions where efficiency meets efficacy, discover the luxury of products designed for instant, visible transformation, reliably enduring results for daily regal routines and uncompromised confidence everywhere, instantly.

We deliver tangible, visible, and flawless beauty at the speed of a royal command. Minimal effort, maximum impact.



## Motivation for the formulation

This is a leave-in grooming product designed to remove knots, tangles, and mats from dog fur by conditioning the hair to make it smoother and more manageable whilst being label-free under CLP regulation for safer use.



## Hero ingredients

An optimised combination of emollients and silicones to give conditioning to your dogs coat.

**InnoSil 905** (Dimethicone), is a cyclic-free alternative that provides comparable volatility to that of cyclopentasiloxane. **Specsil K-57** (Phenyl Trimethicone) is a lightweight, non-greasy silicone used for its superior shine due to its high refractive index. **FINSOLV® TN** (C12-15 Alkyl Benzoate) is a versatile ester that contributes to a light, dry after feel on hair and skin. It is an efficient solvent for active ingredients.

## Ingredients

	INCI Ingredients	Trade Name (Supplier)	% w/w
A	Dimethicone	InnoSil 905 (Innospec)	95.00
	Phenyl Trimethicone	Specsil K-57 (Innospec)	3.00
B	C12-15 Alkyl Benzoate	FINSOLV® TN (Innospec)	2.00

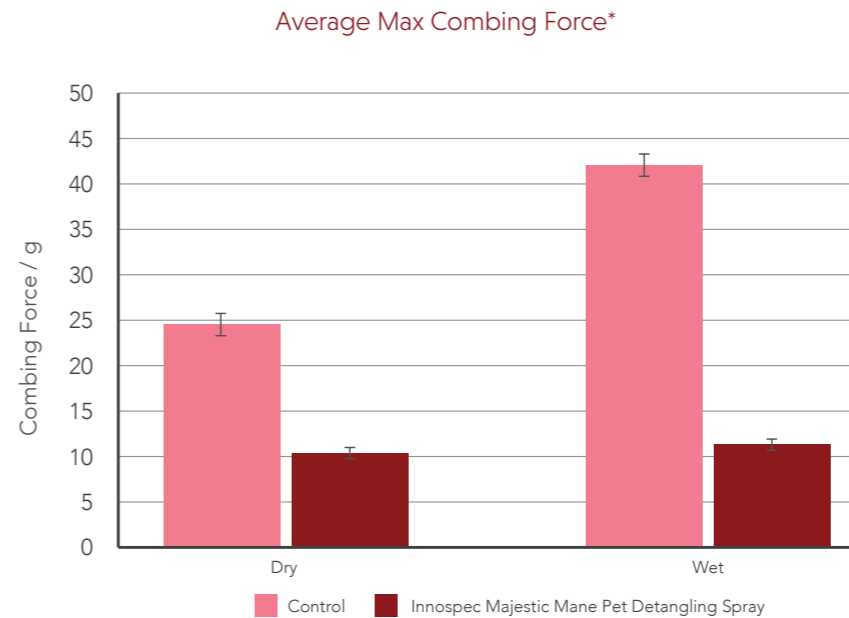
## Preparation procedure

1. Add InnoSil 905 to a suitable vessel and add Specsil K-57 with agitation. Mix until uniform.
2. Add FINSOLV® TN and mix until uniform

## Properties

Appearance: Clear liquid  
 pH: N/A  
 Viscosity: Water thin  
 Stability: 12 weeks, 45°C, 25°C, 5°C, and 3F/T Cycle

## Combing force test results



A texture analyser was used to measure the combing force on European Dark Brown Virgin Human Hair. All tresses were previously washed with a surfactant solution.

The Majestic Mane Pet Detangling Spray significantly reduces the combing force.

\* Average based on 20 combing cycles per tress (average 3 tresses)  
 Virgin Brown European Hair, 10", 5g  
 (treat rate, 0.2g per tress)

## Motivation for the formulation

This is a solid, mild surfactant-based makeup remover specifically formulated for the delicate skin around the eyes, designed to dissolve stubborn products like waterproof mascara and eyeliner without requiring harsh rubbing, giving a superior cleansing experience. It is packaged in a convenient, twist-up tube making it ideal for travel or on-the-go cleansing.



## Hero ingredients

**Pureact I-78P** (Sodium Cocoyl Isethionate) is a mild solid surfactant that gives a creamy lather ideal for facial cleansing products. By using it at a high level in this formulation, along with a high level of glycerin, a soft solid stick is created. **Pureact GLT** (Sodium Lauroyl Glutamate) is a 100% naturally derived surfactant that boosts the foam of this formulation whilst maintaining a naturally derived content of >95% for the stick formulation. Natural oils and waxes help build the structure whilst enhancing the mascara removal properties of this gentle under eye stick.

## Ingredients

	INCI Ingredients	Trade Name (Supplier)	% w/w
<b>A</b>	Aqua		q.s. to 100
	Glycerin	Glycerin	46.00
<b>B</b>	Sodium Cocoyl Isethionate	<b>Pureact I-78P (Innospec)</b>	20.00
<b>C</b>	Coco-Glucoside (and) Glyceryl Oleate	Lamesoft® PO65 (BASF)	1.50
	Vitamin E	Vitamin E (The Soap Kitchen)	1.00
	Persea Gratissima (Avocado) Oil	Avocado Oil (The Soap Kitchen)	2.80
	Euphorbia Cerifera (Candelilla) Wax	Candelilla Wax (The Soap Kitchen)	3.00
	Sodium Lauroyl Glutamate	<b>Pureact GLT (Innospec)</b>	10.00
	Cucumis Sativus (Cucumber) Fruit Extract	Cucumber Extract (The Soap Kitchen)	0.50
<b>D</b>	Citric Acid	Citric Acid Solution (50% w/w)	To pH 5.5
<b>E</b>	Potassium Sorbate (and) Sodium Benzoate	Euxyl® K712 (Ashland)	1.00
	Fragrance	Royale AF G32202 (Azur Fragrances)	1.00

## Preparation procedure

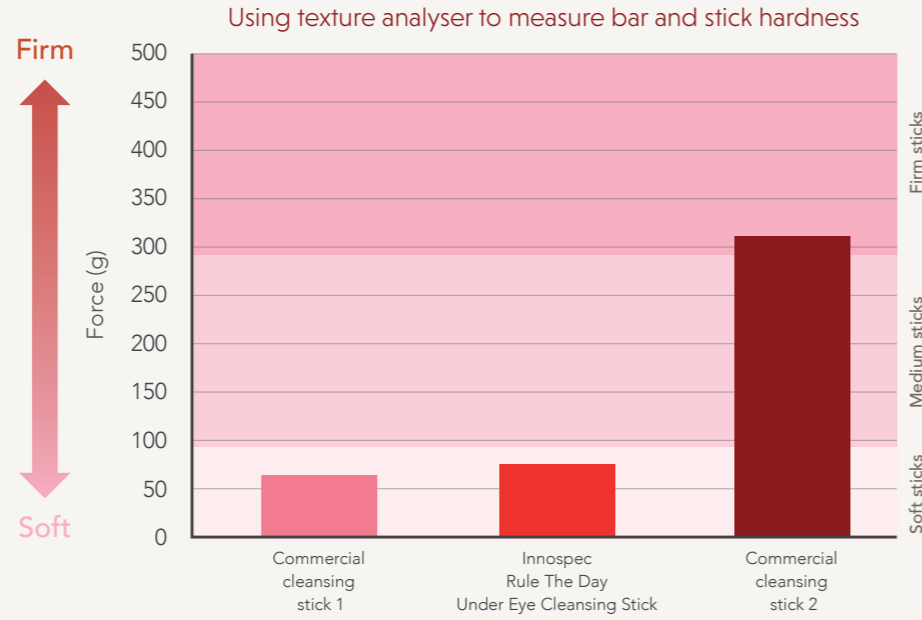
1. Mix water and glycerin until uniform and begin heating to 75-85°C (A).
2. Add Pureact I-78P with stirring then mix until homogeneous (B).
3. Add ingredients in phase C sequentially with stirring, ensuring it is homogeneous after each addition (C).
4. Allow to cool with stirring to 50°C.
5. Adjust to pH 5.5 with citric acid (D).
6. Add fragrance and preservative with stirring (E).
7. Fill into stick packs at ~50°C.

## Properties

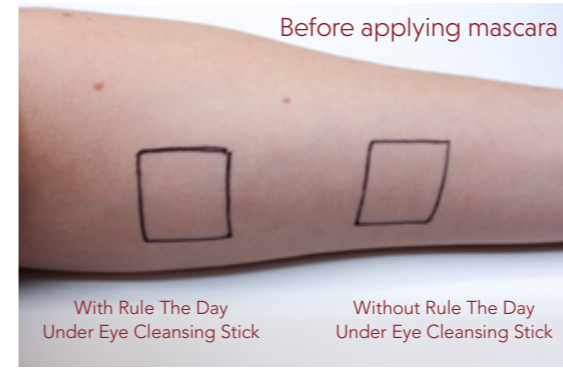
Appearance: Off-white stick  
 pH: 5.5 – 6.5 (10% Solution)  
 Stability: 12 weeks, 45°C, 20°C, 5°C, and 3F/T Cycles

Benchmark comparison of stick hardness

The Rule The Day Under Eye Cleansing Stick is a soft cleansing stick



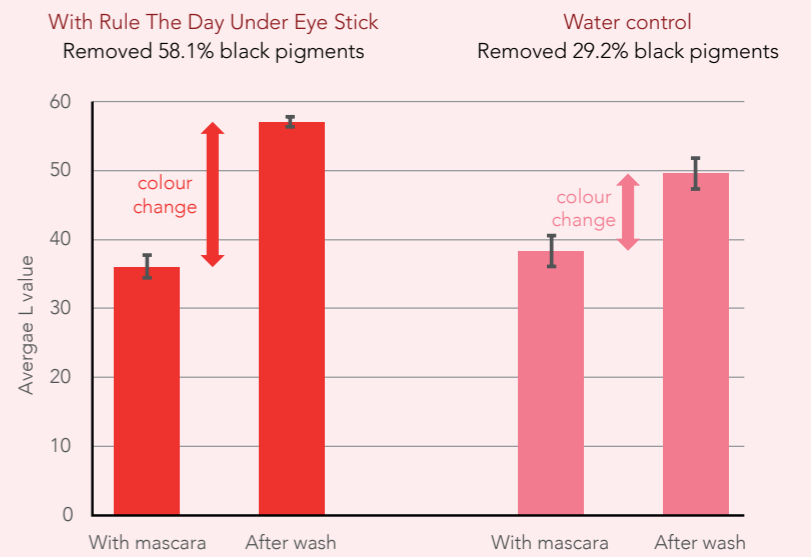
Cleansing efficiency



Rule The Day Under Eye Cleansing Stick was applied to the square on the left only. Waterproof mascara was then applied, allowed to dry then washed off with warm tap water for 30 seconds with rubbing.

Colourimetry measurements were performed before and after cleansing.

Change in the colour of the skin



It can be observed that the Rule The Day Under Eye Stick removed significantly more mascara than water alone



# BE UNIQUE with innospec

## Our commitment to Sustainability

At Innospec, sustainability is more than a commitment, it is an integral part of how we innovate, operate, and support our customers. For more than 26 years, we have published transparent and comprehensive sustainability reports that reflect our progress, our challenges, and our long-term ambitions. Our strategy centres on delivering meaningful impact for our customers, employees, suppliers, and communities.

### Conservation

#### Reducing our environmental impact

We design our personal care ingredients to meet the needs of today's formulator while protecting the needs of tomorrow's consumers. From readily biodegradable surfactants to high performance solutions that enable lower impact formulations, we focus on:

#### Minimizing the environmental footprint of our operations and products

**Offering safe, sustainable chemistries that help customers advance their own sustainability goals**

#### Continuously improving our resource efficiency and reducing waste and emissions

Our aim is simple: formulate beauty solutions that care for people and the planet.

### Care

#### Supporting people and communities

The wellbeing of everyone connected to our business is central to how we work. Across our global Personal Care team and manufacturing sites, we prioritise:

#### A strong safety culture that safeguards employees, contractors, and partners

#### Professional growth and development opportunities for our people

#### Support for local communities through fundraising, sponsorship, and meaningful engagement

We grow as a company when the people around us thrive.

### Commitment

#### Leading by example

We hold ourselves to the highest legal, ethical, and social standards—within our operations and across our supply chain. Our commitment to responsible business practices includes:

#### Transparent governance and accountability

#### Ethical sourcing and supplier engagement

#### Continuous improvement to ensure integrity in everything we do

By leading with responsibility, we help shape a more sustainable future for the personal care industry.



# IJM

## Our Partnership With International Justice Mission

Protecting People Across the Palm Supply Chain

Innospec is committed to responsible procurement and to raising standards of sustainability and ethics across our global supply chain. As part of this commitment, we launched a partnership in 2024 with the International Justice Mission (IJM), a leading organisation working to end modern slavery and protect vulnerable workers.

### Tackling the Root Causes of Modern Slavery

The Indonesian palm industry remains one of the world's highest risk sectors for labour exploitation. Through our collaboration with IJM, we aim to:

- Address systemic drivers of forced labour
- Strengthen legal and social protections for palm oil workers
- Equip governments, communities, and industry partners to identify and prevent exploitation
- Support survivors on their path to safety and justice

This partnership reflects our belief that responsible sourcing must be grounded in human rights, transparency, and long term community empowerment. Together, we are contributing to long lasting protections and helping ensure that the people behind palm derived ingredients are treated with dignity and respect.

### Meaningful Impact in 2025

The collaboration has already delivered significant and measurable results. By 2025, the initiative achieved:

- 829 survivors supported, receiving trauma informed care and long term assistance
- 739 individuals freed from exploitative working conditions
- 11 perpetrators convicted, reinforcing accountability within the justice system

These outcomes demonstrate what is possible when industry partners, non profits, and local authorities work together to create a safer, more ethical palm oil supply chain.



Innospec has a proven track record in personal care. Our ingredients are used in many of the most popular-selling brands on sale in the world today. Let us help you make your next innovative product come to life.

We hold an EcoVadis rating of 78/100 for our sustainability management system and performance, which puts Innospec in the top 6% of all companies rated in our sector globally.

For inspiration, ideas or further information, please contact us:

Innospec Performance Chemicals  
[www.innospecpersonalcare.com](http://www.innospecpersonalcare.com)

Americas

Tel: +1 704 633 8028

Latin America

Tel: +55 15 3383-9510

Europe, Middle East and Africa

Tel: +44 (0) 151 355 3611

Asia-Pacific

Tel: +65 6336 6286

Email: [personalcare@innospecinc.com](mailto:personalcare@innospecinc.com)

® denotes that Natrlquest is a registered trademark in the UK, the European Union and the USA in the name of Innospec Ltd.

® denotes that FINSOLV is a registered trademark in the USA in the name of Innospec Active Chemicals. ® denotes that Iselux is a registered trade mark in the UK and the USA in the name of Innospec Ltd.

® denotes that SUNSOLV is a registered trademark in the UK, in the European Union and the USA in the name of Innospec Ltd.

The facts stated and the recommendations made are based on our own research and/or the research of others, and are believed to be accurate. No guarantee of their accuracy is made, however, and unless otherwise expressly provided by law or in written contract, the materials are sold without warranties, expressed or implied, in particular without guarantee as to suitability for particular purpose. Innospec assumes no responsibility for injury or damage to users or third parties. Recipient agrees to assume all risk and liability whether used singly or in combination with other materials. The information we provide should not be construed as a license to operate under or a recommendation to infringe any patent or other intellectual property right, and you should ensure that your use does not infringe any such rights.